645

Virgina Medical Monthly

Offical Publication of the Medical Society of Virginia

Vol. 60, No. 11. WHOLE No. 980. RICHMOND, VA., FEBRUARY, 1934 $2.00 A YEAR 25 CENTS A COPY

OBSERVATIONS ON HYPERTHYROIDISM WITH FSPECIAL REFERENCE TO SPONTANEOUS RECOVERY.

J. MORRISON HUTCHESON, M. D., Richmond, Va.

Since the time of Parry, Graves and Von Basedow a vast literature has accumulated concerning disorders of the thryroid. New theories of causation have been advanced, classifications innumerable have been devised; nomenclature has flourished; many methods of treatment have been advocated; old ideas have been forgotten and rediscovered. Yet, amazingly little has been added to the conception of these early writers as to the fundamental nature of the syndrome with which their names are connected. Basal metabolism studies as an aid to diagnosis, improved technique in surgical treatment and useful symptomatic remedies have been developed, but, so far as scientific grasp of the situation with which he is dealing is concerned, the physician of today stands on about the same footing as his predecessors of half a century or more ago. The etiology of hyperthyroidism or toxic goiter or thyrotoxicosis is still an unsolved problem.

Therapy in hyperthyroidism has been wholly empirical. Calcium-free water, drugs, vaccines, sera, glandular products, local applications, injections and surgical removal or reduction of the blood supply have all had advocates, and cures seem to have followed each of the measures employed. It is a medical axiom that where a number of remedies are advised for a disease, the probability is that no one of them is curative. The history of medicine also indicates that a therapeutic procedure long in doubt generally proves to be of little value. On these grounds, therefore, one may very properly entertain serious doubts as to the virtues that have been claimed for the various cures used in hyperthyroidism.

As a matter of fact, it has long been recognized, though not sufficiently emphasized, that patients with Graves' disease recover with or without treatment. Niemeyer,[1] in his textbook published in 1870, says that the "majority recover," and casts some doubt upon the supposed effect of the remedies employed. Hilton Fagge,[2] writing in 1886, refers to his experience with the disease at Guy's Hospital since 1868 and comments on the rarity of a fatal termination. He concludes that most cases end in recovery. Osler calls attention to the rapid disappearance of symptoms in certain cases and says that probably 65 per cent of all cases make a good recovery.

Of the numerous contributions during the past quarter of a century, dealing with the course and termination of hyperthyroidism, most have been devoted either directly or indirectly to popularizing some method of treatment, with the implication, at least, that whatever improvement occurs is due to the treatment, without which the patients would have remained ill or died. In some large clinics X-ray is used with excellent results, while elsewhere rest, dietary measures and drugs produce equally prompt and satisfactory cures. By others, surgery of some kind is represented as being the only treatment worth considering; thyroidectomy is advocated in all cases, and when this fails a surgical attack upon the suprarenals has been devised. No satisfactory reason for thyroidectomy has been arrived at save that the majority of its subjects survive and recover, nor has the examination of many thousand glands removed contributed in great measure to an understanding of the condition for which removal is done. Surgical treatment, therefore, however useful, must still be regarded as an empirical procedure.

On the other hand, Kessel, Hyman and Lande[3] in 1923 reported a study of the natural course of the disease in fifty consecutive cases of exophthalmic goiter who were given no specific treatment at all. The mortality rate was 4 per cent and the number cured and improved compared favorably with the best results achieved by any other method of management. Read,[4] with a view of determining the duration of toxicity in exophthalmic goiter as measured by metabolism studies, collected

XUM

from the literature and from his own practice the data on 189 cases, followed for from three to twenty-five months. Forty-eight of these had been treated surgically, eighty-six by X-ray and fifty-five had received no specific treatment. The course of the toxic period, according to the average metabolic rate, was almost identical in the three groups. He believes that the duration depends to some extent on the severity which may be measured roughly by the height of the metabolic rate at the first crisis, and states that it varies from six months to three years, the average being from fifteen to eighteen months. Barker[5] in 1924 wrote as follows: "The average duration of hyperthyroidism, associated with diffuse hyperplasia of the whole thyroid gland, is probably two or three years, no matter how you treat it (medically, surgically or radiologically). You may, it is true, compel a subsidence of the symptoms by treatment but rarely a cure until this time has elapsed."

Most of the patients with hyperthyroidism that I have seen have been treated surgically and, so far as I can judge, with at least average results. A minority, however, who for some reason escaped operation and who could be followed over a sufficient period of time, made such satisfactory recovery as to convince me that routine surgical treatment is unwise and to stimulate further reflection as to the best method of management in the individual case. It is almost by chance that one sees for any length of time a well developed toxic goiter unoperated, as even laymen, as well as many physicians, have the belief that the disease comes out with the gland in much the same way as an inflamed appendix is removed and that to leave it in is highly dangerous. The cases referred to all had goiter, tachycardia, over-action of the heart, tremor, rapid loss of weight and increased metabolic rate. They were followed until all symptoms and signs except goiter had disappeared and for a sufficient time after treatment had been discontinued to justify the belief that they had recovered. A typical example is the following:

A young woman of twenty was seen September 17, 1926, complaining of nervousness, breathlessness and loss of weight. Her symptoms had increased gradually during the summer and for two weeks she had been troubled with head cold and cough. She had been examined previously at another clinic, and operation had been advised but declined. Examination showed all the essential features of Graves' disease, including slight eye changes, and a basal metabolic rate of plus 38.6. She was kept under observation in the hospital eighteen days, during which time she gained seven pounds in weight and became symptom-free. Treatment consisted of rest, Lugol's solution, sedatives and local measures for a mild ethmoiditis. She then returned to college in the North with the advice that she remain under medical supervision and continue taking iodine, which she did for about six months. Several letters were received from her during the following winter, chafing at the rather moderate restrictions advised, and from her physician, reporting her condition as satisfactory. She made up her work, in an institution whose requirements are rigid, and graduated at the end of the session. She was not seen again until August, 1928, at which time she had been married four months, was entirely free from symptoms and somewhat above normal weight. A letter received from her recently, in reply to an inquiry, states that, except for a brief period of nervousness following the birth of a child in June, 1929, she has been well and maintains a weight level slightly above standard.

I have records of a number of similar cases in young people, but in only five, four women and one man, has it been possible to ascertain beyond doubt that recovery has been complete. In addition to diet and iodine, with sedatives as indicated, two patients were kept in bed two and three weeks, respectively, and two were ambulatory, making little or no change in their manner of living. One patient, a school teacher, lost no time from work. She took iodine intermittently for almost two years, noting that when she left it off her weight would decrease. She now weighs twenty-seven pounds more than when treatment was begun in November, 1930, and has gained slightly since iodine was finally discontinued in September, 1932.

The diagnosis of toxic adenoma, spoken of by one writer[6] as a "bit of fancy that has got into the literature," is one that I have made with considerable hesitation. If it is true that such cases do not recover without removal of the thyroid, then I have made a number of wrong diagnoses, as five of my patients with nodular goiters and toxic manifestations are

apparently well. A married woman of fifty, examined April 27, 1927, complained of nervousness, palpitation and loss of twenty-six pounds in weight. Her periods were irregular and there had been excessive vaginal bleeding. Examination showed a small, irregular, rather hard thyroid, pulse rate 130, marked cardiac over-activity and pronounced tremor. The haemoglobin was 45 per cent, red cells, 2,880,000. Basal metabolic rate was plus 38 per cent. Consultation was secured with a surgical colleague, who found what appeared to be a fibroid tumor of considerable size, and operation was tentatively planned for both the pelvic and thyroid conditions. As a palliative measure radium was given to control bleeding, which it did permanently, and the patient left the hospital after one night. Treatment, including Lugol's solution, was supervised at the office with rapid disappearance of symptoms. On August 1st the metabolic rate was plus 4 per cent and she had gained twelve pounds. Operation was discussed but declined and was not urged. After gaining twenty-one pounds in weight she discontinued iodine with the result that she lost eight pounds and the basal metabolic rate rose to plus 24.2 per cent. Subsequently she took the solution poorly as she was entirely free from symptoms and did not wish to gain weight. No metabolism test has been made in the past two years but she maintains her weight and is free from toxic signs.

Of the other four patients with nodular goiters and hyperthyroidism, three were in women past fifty with hypertension and cardiac failure, while the fourth, a woman of thirty-eight, had mitral disease with mild decompensation. On treatment with iodine, toxic manifestations disappeared rapidly in all cases. A small dose, eight drops, of Lugol's solution daily was given more or less constantly for about two years and then discontinued without a return of symptoms. I have seen apparently excellent results follow thyroidectomy in this type of patient and have the distinct impression that it is a useful measure. However, I am equally sure that a certain number do as well, if not better, without it; for when the cardiac over-activity is controlled, by whatever means, the danger of heart failure, so far as the thyroid is concerned, ceases.

These cases, ten in number, all belong to the type for which thyroidectomy is usually advised and even urged as essential to recovery. They illustrate the important fact that some patients with definite hyperthyroidism of average degree do recover without operation and with considerably less inconvenience and loss of time than if operation had been done. Moreover, they provide a basis for speculation as to the nature of recovery and suggest that greater effort be made to select those cases in which the disease will subside quickly and easily if allowed to do so.

Though comparatively new to the present generation of physicians, iodine is an old remedy in thyroid disease. In some form it has probably been used for centuries as a treatment for goiter in general. Aitken[7] in 1872 spoke of it as "almost a specific" and recommended that it be given in the form of the compound tincture, known as Lugol's solution. Trousseau described its beneficial effects in cardiac irregularities associated with Graves' disease, though he did not regard it as curative. As methods of surgical approach improved, the hypothesis of hyperfunction was generally accepted, with its corollary surgical removal; interest in other methods of treatment waned and when iodine was discovered to be a natural constituent of the thyroid its use in treatment came to be regarded as positively harmful. For many years iodine was used by the regular profession only as a prophylactic in goitrous districts and occasionally as a test for Graves' disease, though it is said to have been a principal constituent of quack goiter cures. If a patient did not improve or got worse on the test administration, he was thought to have Graves' disease, which is just the reverse of the idea prevalent at present. It is true that Dock, in a work published in 1915, commented on the good effect of iodine both in relieving symptoms and reducing the goiter in certain cases of Graves' disease, and suggested further experimental use of the drug for the purpose of determining its action. In 1924 iodine was reintroduced, but this time it was advocated with the restrictions that its benefits are temporary, that its continued administration is harmful, that it is to be used only as an adjunct to operation and then in pure hyperthyroidism only, as its effect upon so-called toxic adenoma is dangerous. These restrictions applied only to unoperated cases, as iodine was found to be a most useful postoperative remedy and could then be given indefinitely. Considerable emphasis has been

XUM

given these supposed limitations upon iodine therapy, but there is little evidence in the work reported or elsewhere to indicate that they are valid.

The large majority of patients with the clinical manifestations of hyperthyroidism show marked improvement on iodine and many rapidly return to normal and remain so while the drug is continued. Corresponding changes in the gland tissue have also been observed, consisting of a return from hyperplasia to a colloid state. A few cases do not respond to iodine and occasionally one is seen to grow worse on its use. The explanation of such an event is not clear, but to conclude therefrom that iodine should never be administered over a long period is no more logical than to conclude that thyroidectomy should never be done because of the cases that do not improve or grow worse after operation. I have not observed any ill effect from Lugol's solution, though I have given it to a considerable number of patients continuously for years. In one of my patients who had remained toxic for two years after thyroidectomy the drug apparently lost its effect and X-ray treatment was followed by improvement. While iodine may not be regarded as a cure in the sense of terminating the disease, it is one of the most useful means at our disposal for controlling symptoms. In many instances improvement begins at once and in a few weeks all symptoms, including abnormal metabolism, disappear. This has been held to be the ideal point for surgery, which would be true if operative mortality were the only consideration involved. But the contention that operation shortens the course of the disease and prevents recurrence or does anything more than modify symptoms is still unproven. Consequently, it seems unjustifiable, in the light of what we know about thyroid disease, to subject a patient, whose symptoms have been controlled, to the discomfort, risk and expense of operation.

To attempt to classify a disease, the nature of which is unknown, as medical or surgical or roentgenological, is premature, while energetic justification of such attempts by specious theories is subversive of progress toward a clearer understanding of the disorder. With our present knowledge of hyperthyroidism, improvement in management seems possible through evaluation of the several empiric methods of treatment now in use and through individualization in applying them. If hyperthyroidism is a self-limited disease with a tendency to recovery in the majority of cases, the object of therapy is to control symptoms in the shortest possible time with a minimum of danger and of suffering.

REFERENCES

1. Niemeyer: Text Book of Practical Medicine, 1870.
2. Fagge: Practice of Medicine, 1886.
3. Kessel, Hyman and Lande: *Archives of Internal Medicine*, Vol. 31, 1923, page 433.
4. Read: *Jour. A. M. A.*, Vol. 83, page 1963. December, 1924
5. Barker, L. F.: International Clinics, March, 1924.
6. Hoover, C. P.: *Amer. Jour. Med. Sci*, Vol. 173, 1927.
7. Aitken-Clymer: Science and Practice of Med., 1872

TREATMENT OF ECLAMPSIA.

A. C. DAVIS, M. D.,
and
PAUL DAVIS, M. D., F. A. C. S.,
Roanoke, Va.

The term eclampsia is so vague that it would hardly be possible to enter into an intelligent discussion of the treatment without first making clear a conception of its meaning. The word itself orginated from the Greek word meaning flashing out or sudden lighting up, and was first used to describe those cases of sudden convulsions and high fever occurring at or near the time of labor. Gradually its meaning has been extended to cover all cases of toxemia of pregnancy which would most probably terminate in convulsions if allowed to progress. The terms "pre-eclampsia" and "eclamptic state" have been used to differentiate two stages of this condition. For the purpose of this discussion, however, the term "eclampsia" will be used to include all those ill-defined toxemias of pregnancy and the puerperium which produce or tend to produce convulsions. There has been no effort to classify this apart from the nephritic toxemia of pregnancy, for the treatment of both conditions is the same. Since the thing to be desired above all else in any disease is it prevention, the treatment should begin with prophylaxis.

PROPHYLAXIS

Few diseases can be satisfactorily prevented without knowing the cause, but unfortunately the etiology of eclampsia is still obscure. Various theories have been offered but none entirely explain certain pathological and clinical facts of which the following may be men-

tioned: (1) The genesis of the characteristic hepatic lesions; (2) The predisposing influence of primiparity, multiple pregnancy and hydramnios; (3) That its incidence increases as pregnancy approaches term; (4) That true eclampsia rarely recurs, whereas chronic nephritis gives increasing trouble with each succeeding pregnancy; (5) That a milk diet, which is high in protein and mineral constituents, is as efficacious as one low in protein and free of salt.

Briefly, the only method now known for the prevention of eclamptic toxemia is careful and continuous pre-natal care. The mother's watch-word should be moderation in all things. Out-door exercise, wholesome food without over-eating, and physical and mental rest should be routine. Frequent examinations by the attending physician are important and should include weight, blood pressure and urinalysis. While this prophylactic treatment is not always successful, it aids in prevention, and also enables the physician to start treatment at the onset of toxemia.

Treatment of Pre-Eclamptic State

This usually develops after the sixth month of pregnancy, and so many factors enter into the management at this stage that one is taxed to the utmost to know how to advise. The first rise of twenty points in blood pressure, appearance of edema, epigastric pain, increased nervousness, or persistent headache call for immediate restriction of diet and rest in bed. If symptoms subside within a week, the patient may be allowed to return gradually to her usual mode of living. Examinations from this point must be more frequent than in the usual case of pregnancy, at least once weekly. If symptoms do not subside at the end of one week, the age of the fetus, the general condition of the mother, her desire for children, her age, and the number she has already borne must be considered. If the fetus is six months old and the mother is very desirous of saving its life, some risk could be run in an attempt to carry it to the seventh month. Increasing signs of toxemia while the mother is under treatment is a bad prognostic sign, and emptying the uterus must not be too long delayed. If allowed to continue, permanent pathological changes may occur in the mother and the toxemia will be sufficient to kill the fetus, so nothing can possibly be gained by delay after it is demonstrated that the toxemia is not responding to treatment.

Eclamptic State

With theories concerning etiology varying so widely, it is only natural that we should find methods of treatment recommended which vary from the ultraconservative to the extremely radical. It seems that almost everything from watchful waiting to decapsulation of the kidney and decompression of the brain has been tried. Some establish one method of treatment by which all their patients with eclampsia are treated. In spite of methods which are advocated to reduce mortality, we find that the death rate from eclampsia in Virginia was not lowered from 1920 to 1930.

The higher mortality attending cesarean section and accouchement force after the first convulsion has led to a general acceptance of the fact that such early intervention is useless or harmful. All now agree that convulsions must be controlled if possible. The methods of controlling the convulsions vary greatly in different clinics. Some use the Stroganoff treatment; some use magnesium sulphate intravenously; some use dextrose solution with large amounts of fluid; others use it concentrated. Some attempt to dehydrate the patient by limiting the fluid intake to the output. Some make an effort to start labor and others disregard pregnancy entirely. So, rather than enter into a lengthy discussion of the merits and demerits of the different lines of treatment, we will outline as clearly as possible the method we are now using with satisfactory results.

Following a general plan of conservatism, every effort is made to treat each case individually according to symptoms and to avoid routine orders as far as possible.

First, brain stimuli are to be prevented as far as possible. This means that bright lights, noise and prolonged or unnecessary treatments are contraindicated.

Second. If the blood pressure is high, we give 20 c.c. of 5 per cent magnesium sulphate intravenously on admission. We have failed to see the bad results claimed by some and have certainly seen almost miraculous results follow its use. This is repeated, if indicated.

Third. Nine grains of sodium amytal are given per rectum.

Fourth. Gastric lavage is done through a jutte tube inserted through the nostril and left

in place. If the sodium amytal is expelled from the rectum, six grains are given through the jutte tube.

Fifth. Fifty grams of dextrose solution are given intravenously. If the patient is markedly edematous and apparently water-logged, this is given in a 50 per cent solution; otherwise, a 5 or 10 per cent solution is used.

Sixth. If the patient has had more than two severe convulsions after treatment is instituted, a lumbar puncture is then done. Relief of intra-cranial pressure by this method will sometimes control repeated convulsions.

Seventh. Pregnancy is temporarily disregarded. After convulsions are definitely under control, a vaginal examination is made and the method of emptying the uterus decided upon. If the patient is at or near term and the cervix will admit one finger, a Voorhees' bag or rubber bougie with packing is introduced into the cervix without anesthesia. Labor is allowed to progress normally until the second stage. Pain here usually causes a tendency to a return of the convulsions, and, if this is the case, the patient is delivered under anesthesia with forceps or by version. If the convulsions have developed before term and the cervix is long and rigid, a cesarean section is considered.

Eighth. Continuation of treatment is necessary. Sedatives are given until the baby is delivered, and longer, as indicated. Sodium amytal, as a rule, gives the best results. If the patient does not respond to this drug. sodium luminal or nembutal is tried. Morphine can be used as needed with either drug. Intravenous use of magnesium sulphate is not continued, but this is given intramuscularly and by mouth. Treatment from this point is determined by remaining symptoms.

At the Lewis-Gale Clinic the general plan of treatment just outlined has been in use for about three years. Realizing that our results were now much more satisfactory than formerly, we decided to review our records for eclampsia during this period of time. Of course, only twenty cases is inadequate to draw any conclusions from a statistical point of view, but we hoped to contribute what little we could to a subject which seems to be so far from solution and the treatment of which is still a matter for so much debate.

In selecting cases for review none were used except those actually having convulsions or so severe and unresponsive to treatment that labor was induced. All cases of toxemia which responded to treatment and were allowed to go to term were excluded.

In reviewing Chart No. I, we see that there was one maternal death out of twenty cases; there were three still-births and two infants who died within three days. Eleven of these patients actually had convulsions and ten of these had one or more convulsions before admission to the hospital. Three were admitted with post-partum convulsions after delivery in the home, and one developed post-partum convulsions after delivery in the hospital.

As to the use of drugs, the chart shows we are not bound to any one drug for routine use. Nearly all cases had dextrose intravenously.

CHART NO. I

No. Cases	Maternal Deaths	Infant Deaths		Patients Having Convulsions	Delivered at Term	Before Term
		S. B.	Within 3 days			
20	1	3	2	11	6	14

Post-partum Convulsions	Mag. Sulphate		Intrav. Dextrose Sol.	Sodium Amytal	Luminal	No Morphine
	Intrav.	Intramus.				
4	7	4	16	9	8	8

CHART NO. II

Average Blood Pressure	Patients Having Convulsions		Average Age	Average Time In Hospital
	Before Adm.	Total Convul.		
170/110	5	10	26	16 days.
	3	3		
	13	14		Shortest 12 hours.
	0	3		
	3	3		
	2	2		Longest 29 days.
	1	1		
	5	5		
	3	4		
	1	1		
	3	3		

One of the most striking observations to us was that eight had no morphine whatever, and only one had large doses as recommended by Stroganoff. This was given before admission to the patient who died, but we feel that this was rather a coincidence and not the cause of death.

As previously stated, the total number of cases is not sufficient to draw any conclusions from the information shown in Chart No. II, except that this is about an average group of eclampsia patients as seen in a general hospital. A brief review of a few individual cases may be of more interest than generalizations.

Case No. 1, Mrs. K., Para. 1, age 24. Admitted in a state of shock after having had at least five hard convulsions in the home. Never regained consciousness. Blood pressure 76/64. Intravenous dextrose and a blood transfusion gave no noticeable improvement. Convulsions became more frequent when the fetal head reached the perineum, so low forceps were applied under ether anesthesia and a still-born baby delivered. Nothing, however, seemed to affect this patient's downward course and she died twelve hours after her admission to the hospital. The blood pressure was not taken before admission to the hospital, so we cannot state for certain that this was never high. There was no edema. As stated previously, we look upon low blood pressure and no edema in the presence of convulsions as unfavorable prognostic signs.

Case No. 2, Mrs. M., Para. 1, age 29. Seven months pregnant at the time of admission. Generalized edema with headaches, dizziness and spots before the eyes about three weeks before admission. Not improving under treatment. Blood pressure, 212/120. Urine—albumin plus 4, with hyaline casts plus 2. Labor induced by bougie and packing. Uneventful delivery. Baby lived three days and died apparently from premature birth. This case is reported as a typical case of the so-called nephritic type of eclampsia. Eight months after delivery she still has a blood pressure of 200/110 with albumin and casts in her urine, although the edema has subsided and she has no complaint.

Case No. 3, Mrs. J., Para. 1, age 24. This case is reported principally because we have never before seen a similar one. She was seen in the office at seven and one-half months the day before admission to the hospital. Her course until that time had been entirely uneventful and better than the average. On finding that her blood pressure had risen from 120 to 150, we advised restricted diet, rest in bed and a return to the office in three days. Urine was negative and patient had no complaint of any kind. The following morning she called to state that the membranes had ruptured, so she was advised to come to the hospital. At the time of admission her blood pressure was 170/120. Delivery was spontaneous and uneventful. The baby began to have convulsions a few hours after delivery and continued to have them at frequent intervals for a period of thirty-six hours. After this its course was uneventful and it is now a normal baby in every respect. The mother did well following delivery until the fourth night when she began having generalized convulsions. After having three of these, she responded to treatment, and her convalescence was uneventful, blood pressure being 120/70 at the time of discharge thirteen days after delivery. Examination of the placenta showed an area of infarction. Blood Wassermann and all other examinations were negative. One year following this delivery the patient had a spontaneous abortion at the third month. On the fourth day following this she had two generalized convulsions. For three weeks the patient complained with some headache and dizziness. Physically she is apparently perfect. A basal metabolism test showed a reading of minus 12. She improved while taking small doses of thyroid extract, but we are still uncertain what to advise her as to future pregnancies.

Conclusions

Our study has convinced us that:

1. While a definite general plan of treatment for eclampsia is indicated, no specific routine followed in all cases will give the results that can be obtained by individualization.

2. Early induction of labor when eclamptic toxemia is not responding to treatment will lower both fetal and maternal mortality.

3. Impulsive and ill-timed efforts at delivery are to be strongly condemned.

4. Control of convulsions is important and, if all other methods fail, the use of ether or chloroform is justified.

5. Cerebral edema can often be relieved by spinal puncture and convulsions controlled in this manner.

XUM

6. Large doses of morphine are seldom if ever necessary.

7. There is no specific sedative or hypnotic, but our best results are now being obtained in most cases by the use of sodium amytal or nembutal.

8. We have seen no harmful effects or results from the use of magnesium sulphate in moderation.

9. Dextrose solution intravenously is indicated.

10. Low blood pressure and absence of edema in the presence of convulsions give a bad prognosis.

Lewis-Gale Hospital.

FACTORS INFLUENCING MORTALITY IN OPERATIVE CARCINOMAS OF THE LARGE INTESTINE.*

A. STEPHENS GRAHAM, M. D., M. S., Richmond, Va.

Mortality following radical and palliative operations on the large bowel, contrary to an apparently widespread opinion, is not prohibitive, nor are fatalities from recurrence so discouragingly numerous as was the case a quarter of a century ago. At about that time barely 25 per cent of the diagnosed cases were operable, 20 to 50 per cent of those who were operated on died in the hospital, and well over 85 per cent of the survivors eventually succumbed to recurrence. In striking contrast to these results, surgeons during the past decade have reported operability rates as high as 65 per cent for large series of cases while a comparative study of the mortality rate for individual surgeons and institutions by five and ten-year periods has revealed a progressive decline until now the general rate for all types of operations, in the hands of experienced surgeons, approaches 10 per cent. Moreover, the incidence of recurrence as determined for numerous large groups of cases varies from 25 to 50 per cent, which is an improvement of 40 to 60 per cent over the best available figures several decades ago. In other words, until relatively recent years fewer than five out of one hundred patients, in whom a diagnosis of malignancy of the large bowel was established, were alive five years after operation, whereas now we can reasonably expect between thirty and fifty to be living at the end of such a period. As a matter of fact, a study of any statistical data which are available indicates that more patients with carcinoma of the large bowel and rectum are found to survive over a given period of years than those with carcinomas of any other portion of the gastro-intestinal tract.

To the trained proctologist, roentgenologist, and surgeon must go the foremost credit for this recent progress but its continuation, I am convinced, will depend more upon the general practitioner and medical specialist than upon the surgeon whose skill and ingenuity in devising technical procedures has reached a point beyond which relatively small improvement can be expected. The sum and substance of the matter is that in order to make further gains there must be a material increase in the number of cases diagnosed early. In this manner we may hope to augment the operability and after all it would appear to me that one must regard operability as the mainstay to successfully combating malignancy. That is to say one should rather consider how many persons out of a hundred will be benefited either by operative measures or curative interference over a term of years than how many successful technical procedures may be accomplished with a low hospital death rate.

Malignancy of the colon and rectum give rise to a variety of symptoms, none of which are pathognomonic but if the two cardinal features, namely, rectal bleeding and change in bowel habit, alone were kept in mind and when encountered would universally prompt thorough investigation of the gastro-intestinal tract, starting with digital and proctoscopic examination of the rectum and proceeding through to roentgenoscopic study of the colon after barium enema, then I am certain that inoperable cancer of these structures would become exceedingly rare and in this manner would the deaths, both immediate and remote, be reduced to a minimum. The earliest and most constant sign of malignancy of the left half of the colon and rectum, in my experience, has been blood which may appear mixed with the stool or may simply streak the stool. Hemorrhoids are frequently associated with rectal cancer and in many instances are quite misleading. Rankin and Jones reported that in 10 per cent of three hundred cases operation had been performed for hemorrhoids after the onset of symptoms despite the fact that a growth was in reach of the examining finger or demonstrable with the proctoscope in every instance. Similarly, in my own prac-

*Upon author's request, because of lateness of the hour, read by title at the sixty-fourth annual meeting of the Medical Society of Virginia, in Lynchburg, October 24-26, 1933.

tice since January 1, 1933, four of fourteen (29 per cent) cases had been treated for hemorrhoids after the onset of symptoms, yet in three instances a cancer was palpable on rectal examination.

Change in bowel habit is of a significance almost equal to that of rectal bleeding but unfortunately it is often erroneously interpreted. Loose stools, even to the number of fifteen or more in twenty-four hours, need not indicate dysentery or colitis since only too often does almost complete obstruction from an annular cancer give rise to such symptoms following repeated purgation. Increasing constipation, frequency of stools, alternating constipation and diarrhoea, however slight, if it persists, and particularly if the patient is past forty, should prompt a painstaking examination of the gastro-intestinal tract.

Among the other factors that influence mortality there are several that deserve special consideration, such as the pre-operative preparation of the patient, the choice of anesthesia and operative procedure, and the post-operative care. Adequate care in preparing these patients for operation is, in my opinion, secondary in importance only to the early recognation of the malignancy. Emergency surgery rarely is necessary or justifiable in such cases since obstruction, when it develops, is slowly progressive and well tolerated, even for a week or more after it becomes complete. The blood chemistry under such circumstances, in striking contrast to the findings in acute obstruction of the small intestine, may remain unaltered. It is always advisable to hospitalize the patient for a period of time sufficient to enable decompression of the obstructed colon and restoration of the hypertrophied and often edematous bowel to a healthier state, to combat dehydration and the effects of malnutrition, and to permit an investigation of the function of the other organs of the body. My own regime during this pre-operative interval is briefly as follows: (1) Repeated colonic irrigations with normal saline solution; (2) high caloric low-residue diet, consisting chiefly of carbohydrates; (3) forced fluids orally, subcutaneously, or intravenously; (4) transfusions when indicated, and, (5) special measures directed toward overcoming concurrent disease in other organs. (6) Intraperitoneal vaccination against peritonitis in certain cases. Obstruction in the urinary tract or cardiovascular disease will be the complicating disorders most frequently encountered since many patients with surgical lesions of the colon and rectum are elderly and many of the men have more or less prostatic hypertrophy.

The patient should be carefully observed during the period before operation in an effort to estimate surgical risk and to make the selection of a procedure that seems wisest in the individual case. The employment of one operation to the exclusion of all others decidedly narrows the scope of usefulness which surgery offers these sufferers, and unquestionably vitally influences immediate mortality, functional results, and ultimate survival. The object in every case should be to consummate the most radical excision of the involved segment of bowel and its contiguous lymphatic structure which is consistent with reasonable prospect for recovery, but in judging the extent to which a procedure should be carried one must be led by the circumstances in each case, as the age and sex of the patient, the presence of obesity, profound anemia, marked loss of weight or evidences of associated disease in other organs. The more radical operations, such as the combined abdomino-perineal resection of the rectum should be reserved for the relatively young and robust individual and seldom be employed for the elderly or markedly debilitated patient who might, however, well tolerate the more conservative perineal resection of the rectum, which is preceded several weeks by a colostomy.

The choice of an anesthesia should be made in a manner similar to that employed in the selection of the operation. For those patients who are in fairly good physical condition, one can use ether, gas, or spinal anesthesia with excellent results. For the debilitated patient local anesthesia, with or without gas, and supplemented by ether if necessary is the safest method, while spinal anesthesia should be used in very small doses, if at all. Spinal anesthesia when not definitely contra-indicated appears to be peculiarly applicable to surgery of the colon. It provides excellent relaxation during the operation and in conjunction with liberal post-operative use of morphia insures against return of peristalsis for a period of forty-eight hours or longer. This feature is very important in view of the lethal nature of the bacterial flora inhabiting the colon and because of the frequency with which the bowel is purposely temporarily obstructed as a part

of the operation. For surgery of the anus and rectum sacral block offers an even greater margin of safety yet provides ample relaxation and anesthesia.

Too much emphasis cannot be placed on the importance of carefully regulating the postoperative regime as a factor in reducing mortality. Complications are of frequent occurrence and considerable variety but many of these may be prevented, or, by early recognition, their progress be stayed. Sepsis, shock and collapse, pulmonary complications, and urinary disorders are the chief causes of immediate death. Danger from sepsis may be minimized by the control of peristalsis during the initial forty-eight hours through the free use of morphia and the prohibition of fluids by the oral route. Shock and collapse are more readily prevented than relieved and, since many of the patients under consideration are debilitated or must undergo drastic and time consuming procedures, it is well to institute preventive measures while the patient is still on the operating table. In some cases this will entail merely the subcutaneous administration of normal saline solution, or intravenous injection of glucose solution but in many instances a transfusion will be indicated.

Pulmonary complications need no special comment here since the same problem obtains following operations on other organs. Fatalities from infection in the urinary tract probably can be prevented with a greater degree of certainty than the other complications if a few precautionary measures are taken. Urinary retention should be prevented or relieved promptly. Rather than practice repeated catheterizations over a long period, I install a permanent catheter prior to or soon after operation in most cases of carcinoma of the rectum. The catheter is irrigated twice a day and changed every five days. Before removing the catheter, it is clamped off for gradually increasing periods until at the end of about the third day it is left closed, except when the patient has a strong desire to void.

Among the most unexpected and dangerous complications which occasionally follow surgical procedures, especially those that involve the gastro-intestinal tract, is an acute, inflammatory and frequently suppurative process of the parotid gland either on one or both sides. The cause of parotitis is not clearly understood but it is highly probable that the incidence can be lowered by preventive measures. Since it is necessary to keep patients who have had resection of the colon and rectum without food or drink by mouth for three or four days, conservation of function of the parotid gland may be attempted by permitting the patient to suck slices of lemon or chew gum. Special efforts also should be made to keep the mouth thoroughly clean. However, once the inflammatory process has become evident, progress can often be arrested and suppuration prevented by early application of radium to the swollen gland. Of the twenty-eight patients at the Mayo Clinic who were treated with radium, only four died. Three of the deaths occurred after the parotitis had completely subsided and at necropsy the primary cause of death was found to be elsewhere. This gives a mortality in the cases treated with radium of only 3.5 per cent, if the three deaths can be excluded. In the fifty-eight cases in which radium was not used twenty-three of the patients died, a mortality rate of approximately 39 per cent. Surgical drainage was necessary in twenty-four of the fifty-eight cases and 50 per cent of these died. Yet, of the twenty-eight cases in which radium was used, in only two was it necessary to substitute surgical drainage and neither of these died.

503 *Medical Arts Building.*

Discussion*

Dr. D. M. Thomasson, Lynchburg: As diagnosis of cancer of the large intestine frequently demands the services of the diagnostic team, including a clinician, a radiologist, a pathologist and a surgeon, I shall confine my remarks to the subject of early diagnosis of cancer of the rectosigmoid, which now totals 5 per cent of all cancers, and should be diagnosed by all of us if we will only make a careful rectal examination.

It might interest you to know that every case of rectal cancer admitted to the service of Dr. Curtice Rosser, at Baylor University Hospital in 1931, came with a history of operation, or palliative treatment for relief of rectal symptoms. Among the cases was one sixty-one year old physician, who was subjected to a hemorrhoidectomy in June, treated intensively for amebic dysentery in July and August, and in September found to have a large, easily palpated, rectal cancer.

The first point to be stressed most insistently with regard to growths in the rectum is the necessity for an early diagnosis; and it may be added, for a correct diagnosis, which is essential for success in the treatment for malignant diseases.

Charles Gordon Watson, of London, makes the definite statement that cancer of the rectum in the earliest stages is a local disease, which is limited to the mucosa and sub-mucosa, and as such, can be cured by radical surgery in the great majority of cases.

*Prepared in advance of meeting and handed in for publication.

The onset of the disease is insidious, painless and practically symptomless for many months. The textbook syndrome of loss of weight, cachexia, obstruction and abdominal distention, which accompanies final stages, is of no practical diagnostic import. As Dr. Graham has just told us, irregularity of the intestinal habit, with the loss of blood, is the most early and constant symptom. Bleeding then, is probably one of the early manifestations of cancer of the rectum, and by some, rectal bleeding indicates cancer until neoplasm is eliminated by the most thorough diagnostic method.

Digital examination, although valuable, should never be considered conclusive. It will determine the presence of tumor in some 75 per cent of the cases. Visualization of the tumor is, however, essential in all cases.

By proctoscopic examination four factors can be determined: First, it will determine the site of the growth; second, the size of the tumor will be revealed; third, the degree of obstruction will be estimated; and fourth, it will determine the amount of fixation. Biopsy is an extremely important step in determining the grade of malignancy.

"The typical malignant ulcer of the lower bowel is a single lesion. It is indurated. Its surface presents a crater-like depression, which bleeds easily. The mucosa immediately adjacent to the firm, everted edge is normal in every respect." (Buie.)

Gradually the public is becoming more and more aware of what scientific medicine has to offer in saving life when cancer threatens and, for many reasons, among which the early recognition of rectal cancer stands foremost, I advocate routine proctoscopic examination as the necessary procedure in every general examination, for rectal cancer untreated has a 100 per cent mortality.

CORONARY THROMBOSIS.*

JOHN HUNDLEY, JR., M. D., Lynchburg, Va.

With increasing accuracy in diagnosis, closer observation of the patient, and the assistance of the electrocardiograph, coronary thrombosis is no longer a postmortem pathological curiosity but a finding not at all rare. The condition is not uncommonly given as a cause of death, and seems to be increasing in incidence, largely, I feel, as a result of the more careful diagnosis.

Coronary thrombosis is the sudden occlusion of one of the main branches of the coronary arteries, either by thrombus or embolism, and is one of the results of atheromatous or arteriosclerotic changes, occurring locally in the coronaries or as part of a general process.

That branch of the left coronary artery which descends near the interventricular septum, supplying part of the septum and most of the left ventricle, including the apex, is the vessel most frequently affected, largely because of a narrowing of the lumen of the vessel just distal to the branching. Other coronary arteries may also be the site of an occlusion, but less frequently. Contrary to belief long held, the coronaries are not strictly end arteries, but the anastomosis is poor and variable. The fact that anastomosis is possible is proven by the not infrequent finding at autopsy of an old occlusion, having gradually occurred without recognizable symptoms during life. A sudden blocking produces marked changes accompanied by violent and rather definite symptoms.

The etiology of coronary thrombosis is that of local atheromatosis, and is unknown. Syphilis plays slight, if any, part. Hypertension is frequent. The only constant, or relatively constant factors, are the age group, usually fifty to sixty or above, and the much greater incidence among men. Alcohol, tobacco, exercise and food seem to have no relation. Osler thought that the social status played some part, but all types, from the most intellectual to the most ignorant laborer, are affected.

Pathologists had noted the condition for years, but only comparatively recently has the symptomatology been related. The typical history is somewhat the following: A man above the age of fifty, with slight or marked hypertension, is subject to occasional attacks of substernal pain which may be only a sensation of fullness, or they may be stabbing, gripping or burning, all symptoms which have frequently been related in the patient's mind to indigestion. He may or may not have had some shortness of breath. Suddenly the man is seized by an agonizing pain, quite different from what he has previously experienced. He is unable to remain still, and movement does not, as in angina pectoris, increase the pain. He may gasp for breath, become cyanosed, skin become cold and clammy, and sweat profusely. Often he is nauseated and may vomit. The pain may extend over the entire chest, into the left arm, or even into the right arm, or may be largely lower thoracic and epigastric. The pain is constant, lasting for hours or days, without ease or relief except a slight ebb and flow. The symptoms vary. The cyanosis may be severe or absent; likewise the dyspnea. The frequent nausea may be followed by vomiting or diarrhea. There may be urinary suppression. There is a group with no pain but a sudden severe dyspnea with a profound weakness. The onset often wakens the patient out

*Read before the South Piedmont Medical Society, at Lynchburg, Va., April 18, 1933.

of a sound sleep, or comes on during rest. The entire picture is one of a severely ill patient, in an acute emergency.

The physical signs are utterly out of proportion to the appearance of the patient. Turning from the contemplation of an individual evidently acutely ill, to the examination of the heart, very little is found indicative of the seriousness of the situation. The patient is ashen gray, with a mixture of pallor and cyanosis, beads of sweat cover the face or a profuse perspiration is present. The pulse is variable, usually irregular, often rapid and thready, and occasionally dropped beats are noted. The blood pressure is generally low, markedly so in those cases having a pre-existing hypertension. The notably sick appearance, with the mild heart signs, may, especially in those patients with nausea and vomiting and epigastric pain, serve to distract attention from the seat of the trouble in the heart and focus on the possibility of an acute abdominal emergency.

Diagnosis of the condition very largely depends upon keeping in mind the possibility of its occurrence. The symptomatology is varied, and there is no one diagnostic feature. The entire picture makes the diagnosis. The patient is usually a male, past the age of fifty, giving a history of mild substernal distress for some time preceding, having a sudden attack of severe substernal pain, not related to effort, not relieved by rest or vasodilators, the pain continuing without ease or fluctuation, and is often referred to the left arm. The attack is accompanied frequently by nausea, vomiting and even diarrhea. The expression is pale and cyanotic, and the face covered with sweat. Definite cyanosis is present, with dyspnea of varying degree. Rales are noted in the bases of the lungs behind. The pulse is weak and heart sounds distant. Heart action is irregular. Blood pressure is lowered. Later, in two to five days, there is a slight elevation of temperature to 99 or 100, a leucocytosis of 12,000 to 15,000, occasionally more, with polymorphonuclear cells predominating. Occasionally there may be heard a pericardial friction rub three to eight days after the onset, and persisting for two or three days. This is the picture from which the diagnosis can usually be made by following closely the patient, and keeping in mind the possibility of the occurrence of a coronary thrombosis.

The electrocardiographic signs are often conclusive, and may locate specifically the lesion. But negative signs are of no value, and the patient should never be moved to an electrocardiograph.

Coronary thrombosis must be differentiated from other conditions in which thoracic pain is a prominent symptom. Angina pectoris occurs in the same age group, is marked by a sudden onset of excruciating substernal pain, usually following exertion or an emotional upset. The pain is relieved by rest and by the administration of nitrites. Pallor is present, but no cyanosis. The blood pressure rises during the attack, and the attacks are short. It should be remembered that coronary thrombosis may follow years of anginal attacks, and, oddly, following recovery, may terminate the attacks of angina. Valvular heart disease, especially mitral stenosis, may result in severe precordial pain. This occurs most frequently in younger people, and the characteristic murmur makes the diagnosis clear.

Syphilitic aortitis is accompanied by pain under the manubrium, which is more of an ache or an oppression, rather than the stabbing agonizing pain of thrombosis. The history of syphilis, at times the examination of the heart and aorta and the Wassermann or Kahn reaction serve for differentiation. Syphilis is rare as a causative factor in coronary thrombosis.

The most difficult, and the most frequent condition requiring differentiation from coronary thrombosis, is the acute upper abdominal condition. In thrombosis there may be localization of the pain at the tip of the ensiform, nausea, vomiting, and even diarrhea may be present, as well as a rigid epigastrium. There is collapse and rapid thready pulse in both conditions. These symptoms may be present in perforated gastric or duodenal ulcer, acute gall-stone colic, perforation of the gall-bladder, and acute pancreatitis. Rarely a gastric ulcer may perforate without giving previous symptoms of gastric disease, but generally a careful history will elicit a record of previous trouble related definitely to the abdomen. The history may disclose previous attacks of shortness of breath, or mild cyanosis, which will refer more definitely to the heart as the site of the trouble. Physical examination of the heart or the abdomen will give little help, but it would be exceedingly rare in an attack of such violence

that there would not early be present, in the bases of the lungs behind, scattered rales which would definitely place the condition as one which is cardiac in origin.

The prognosis of an attack of coronary thrombosis is most difficult to give. Formerly the condition was felt to be almost invariably fatal, but more cases are being diagnosed, and the outcome is much more favorable in the light of more recent work. White recently reported a case which he had followed for seventeen years, finally dying from an attack of cerebral hemorrhage, and autopsy disclosed the old healed scar of the heart muscle. The prognosis is, of course, dependent upon the size of the vessel affected, the area of muscle supplied by that vessel, the condition of the muscle preceding the thrombosis, the extent and severity of the vascular sclerosis, other conditions of the heart and circulation, and, after recovery from the initial attack, the care which the patient will, and is able to take of himself. The attack may terminate fatally within a few minutes or hours, or after a few days or weeks. Such fatalities are due either to rupture of the heart muscle, weakened by thrombosis and lack of blood supply, or to ventricular fibrillation. Weeks or months later the thin scar tissue at the site of the thrombosis may rupture as a result of some comparatively slight exertion. The after-care, scrupulous living within the limited heart capacity, will save many cases recovering from the initial attack for years of comparative usefulness and activity.

Treatment may well be divided into that of the immediate emergency, and the after-care. The immediate requirement is relief from the agonizing pain. For this morphine is necessary in adequate doses, up to one grain in a four-hour period. The vasodilators are useless, and nitroglycerine may be actually harmful. After the heart rallies digitalis should be given in full doses. In ventricular tachycardia quinidine sulphate may be life saving, and there seems to be less risk in its administration in these cases than in the old fibrillating hearts. The administration of drugs is, however, the least important. Prolonged and absolute rest in bed is essential. Nothing should be permitted to the patient to perform for himself. The slightest exertion may provide the additional strain which will rupture the damaged myocardium. The period of rest in bed is variable. Lewis states that the myocardial scar is firm in eight weeks, but even longer may be required to gain assurance from risk. The general treatment is unimportant—a light diet, mild laxatives or daily soap suds enema, and water within normal limits.

After the myocardium has healed and the heart indicates that it is able to assume some additional burden, the patient is allowed out of bed and the problem of the future must be faced. Educating the patient to live within restricted limits, avoiding every exertion or excitement, stopping at the first sign of shortness of breath, giving up those games, letting others drive his car, avoiding long tiresome trips, the thousand and one *don'ts* that the patient will have to impose on himself, making him realize the absolute necessity of living within such limited range, and at the same time keeping him from feeling that such a life is not worth living,—that is the test which will try the patience and strain the personality of the most gifted physician.

To summarize, coronary thrombosis is more frequently seen and more clearly recognized than formerly. "It is the one primary cause of sudden dramatic death in an apparently healthy individual." Certain conditions apparently predispose to or precede an attack. They are—age over fifty, males most often, general or local arteriosclerosis, hypertension, anginal attacks or mild persistent or recurring substernal pains, discomfort and fullness of the epigastrium after meals, slight shortness of breath and slight cyanosis on exertion. The diagnosis of the attack is not too difficult if the possibility is kept in mind. Treatment is rest, absolute and prolonged. The prognosis is uncertain, but, having survived the initial attack, a reasonably long and useful life is possible to those patients who can be made to realize and live within their individually determined and much reduced cardiac capacity.

808 *Allied Arts Building.*

A DISCUSSION OF PAINLESS LABOR.*

PIERCE RUCKER, M. D., Richmond, Va.

Discussions of painless labor usually begin with an account of the history of obstetric anesthesia. I will, therefore, not take up your time in such a manner but instead, I would like to review briefly the physiology of parturition, as that is the foundation upon which one

*Read before the Medical Association of the Valley of Virginia, May 25, 1933.

should build the conduct of painless labor. Some 267 days after conception, or 280 days after the first day of the last menstrual period, the patient usually goes into labor. Just why, is another question. My own theory is that the natural emptying function of the uterus is held in check by a hormone that is manufactured first by the corpus luteum and later by the placenta. Normally the placenta undergoes senile changes towards the end of pregnancy and when its secretion sinks below a certain level the patient goes into labor. There are certain prodromal symptoms. The patient feels like she is going to menstruate. Menstruation and labor are qualitatively the same process. In one case, the unfertilized ovum is delivered, in the other, the fetus. The preparturitional stage is accompanied by profound metabolic changes, as is shown by an increased excretion of sodium chloride in the urine, and an increased nitrogen output, with an increased percentage of ammonia, amino acid and creatin fractions.

Clinically, there is a loss of weight in the last week or ten days of pregnancy. The cervix is softened and somewhat dilated and is usually effaced. Until this "ripening" takes place, the uterus is relatively inert and the cervix resists very decidedly efforts to make it dilate. Knauss, experimenting with rabbits, has shown that before this time injection of extract of posterior pituitary has no demonstrable effect upon the uterus, but as the uterus "ripens" the effect of this drug becomes more and more evident. Just as the uterus passes the threshold of excitability the cervix is so resistant that the majority of the litter are stillborn, but the closer to term the rabbit is, the more readily does the cervix dilate and the fewer stillbirths. This is an important observation and has much clinical significance.

The purpose of the first stage of labor is the dilatation of the cervix. This is accomplished entirely by uterine contractions. The textbooks speak of the membranes and the amniotic fluid in front of the presenting part, the forewaters of the Germans, as an hydrostatic wedge. This is probably incorrect. There is some experimental evidence to show that the cervix dilates actively in the same way that sphincters elsewhere in the body do, as for instance, the pylorus We know that if you rupture the membranes in the early part of labor or even before labor starts, dilatation takes place if anything more rapidly than it would have done had the hydrostatic wedge been present. Be that as it may, the uterine contractions are necessary to cause the cervix to dilate and they are associated with pain which increases in severity as the labor progresses.

At the end of some sixteen hours in primiparae and eleven hours in multiparae the cervix is fully dilated. The patient now passes into the second stage of labor, the so-called expulsive stage. The force of the uterine contractions are no longer sufficient and must be augmented. In normal labors this is accomplished by bearing down which the patient does reflexly. The powerful abodminal and respiratory muscles are able to push the fetus along the birth canal until it appears at the vulva and is finally expelled. The pain in this stage is much more severe, not only because the contractions are harder but also because the presenting part stretches and tears the birth canal.

The third stage is like the calm following the storm. The placenta is separated from its attachment to the uterine wall by rhythmic contractions of the uterus. When it becomes separated it drops down into the lower uterine segment. To expel it the uterus normally needs outside help of some kind. With the delivery of the afterbirth the story is by no means ended. The uterus must remain tonically contracted in order to prevent serious or even fatal hemorrhages from the raw placental site.

The problem now is what can we safely do to ameliorate the pains that accompany these very essential uterine contractions. The question that I am asked most frequently is why I induce labor. It seems to be taken for granted induction of labor is an essential part of what people speak of as my method. I want to say right here that I have no fixed method. I study my patients and try to outline a treatment that seems best suited to the individual patient. Induction of labor is not necessary, it is merely more convenient to most patients. I find that the great majority of patients like to plan ahead and to go into the hospital on a fixed date. If the history, the measurements of the fetus and the feel of the cervix indicate that the patient is at term, I see no objection to setting a definite date for the delivery. When there is obesity, hydramnios or multiple pregnancy, the measurements of course are not to be relied upon. By getting the patient to

the hospital before the pains begin one can more easily control the first stage pains. In round numbers 80 per cent of my patients elect induction of labor. The simplest way to induce labor at term is to give the patient castor oil one ounce and quinine gr. v., an hour or so before rupturing the membranes.

The problem of pain relief in the first stage is to give enough analgesia to keep the patient from remembering her pains but not enough to stop or slow down the uterine contractions.

The drugs that have served me best are: sodium-amytal by mouth augmented as necessary by hyoscin hypodermically, (2) morphine and hyoscin hypodermically, (3) quinine-ether-oil per rectum, and (4) avertin per rectum. At times it is best to switch from one to another as circumstances demand.

For best results with sodium-amytal, one should begin before labor starts or certainly before the patient has hard pains. The drug is rather slow in acting and its effect lasts twelve to twenty-four hours. Routinely I give the patient twelve to fifteen grains at once and supplement this with hyoscin in doses of 1/200 of a grain, often enough to keep the patient asleep between her pains. In multiparae who start with good hard pains I vary this routine by giving 1/100 grains of hyoscin at the initial dose. All writers on sodium-amytal mention the danger of shock in the occasional patient and this must always be borne in mind. I have an idea, although my cases of shock have been too few to prove it, that shock is more likely to occur in those patients who are having hard pains before the sodium-amytal is given. The cases of shock that I have had, have all responded to elevation of the foot of the bed, a hypodermic of 1/30 grain of strychnine and a hypodermoclysis of saline solution with 1 c.c. of pituitrin in the first 500 c.c. of fluid.

Morphine and hyoscin are better adapted to the patient who has already started having good pains when you first see her and who has more than three hours of labor ahead of her. I give an initial dose of 1/6 gr. of morphine and 1/200 gr. of hyoscin and repeat the hyoscin as occasion demands. I try to keep her sleeping between pains or else definitely disoriented.

The rectal administration of ether-in-oil had best be given after the cervix is one-half dilated. It can be used with patients who come into the hospital at that time or upon those who do not seem to be getting the proper relief from the first or second method of treatment. The formula that I use is the No. 3 of Gwathmey's original communication, i. e.; quinine grs. x, alcohol two drachms, ether two and one-half ounces, oil q. s. ad four ounces. This can be repeated either in full quantity or in one-half doses as necessary. It is very useful in tiding over the last part of the first stage and the first part of the second stage.

Avertin, 65 mgm. per kilo of body weight, can be used in much the same way as the ether-in-oil. It acts more quickly and does not last quite so long. It is a somewhat quieter and smoother basal anesthesia than the ether-in-oil. I am especially fond of it in those cases that come into the hospital with nearly full dilatation or when labor is induced with a bag, as it seems to hasten the dilatation under such circumstances.

When the patient gets into the second stage of labor, the problem is somewhat different. The pains are harder and some form of anesthetic is needed. With the patient in the hospital, I am not so concerned about stopping the progress of labor, for if we do, it is an easy matter to terminate labor with forceps or by version. I am concerned, however, with the possible effect of the anesthetic upon the baby and upon the tonicity of the uterus in the third stage.

Ether is still the safest of all anesthetics and this applies to the effect upon the newborn also. The babies are somewhat anesthetized when they are born and are somewhat slower in breathing. This may be a benefit rather than a disadvantage for such babies are less apt to aspirate infectious fluids from the birth canal into their lungs.

I rarely use chloroform except to relax a nervous patient for a moment so as to introduce a bag, or to do a low forceps operation. When given skillfully it is an ideal anesthesia for versions, but nowadays it is hard to find an anesthetist who is skillful with chloroform. Most of the modern internes have learned to *pour* ether and do not readily *drop* chloroform.

Nitrous oxide-oxygen as an anesthetic, in contradistinction to an analgesic, has never appealed to me. There is always more or less cyanosis in the mother, which the baby must

XUM

necessarily share and I have felt that cyanosis was one of the predisposing causes of cerebral hemorrhage in the newborn. Similiarly, ethylene has been disappointing to me. There was a definite increase in my fetal mortality when I was using ethylene, which promptly subsided when I stopped using it.

Spinal anesthesia has a definite, although small place in obstetrics. It is an ideal anesthesia for Cesarean section, and for operative delivery from below, when the patient has some chest or kidney trouble that is a contraindication to an inhalation anesthesia. For forceps or version, 50 mgm. of novocain dissolved in the spinal fluid is perfectly satisfactory.

Local infiltration of the perineum with 0.5 per cent novocain for forceps operations, episiotomies and repairs should be used more frequently than we do. My present practice is to use local anesthesia if the patient comes to the delivery room deeply under the influence of the first stage analgesia, or if the patient has a head cold, and in times when influenza is prevalent.

Results

With the principles laid down firmly in your mind and with the drugs mentioned, one can get complete amnesia from the time the treatment is started in over 94 per cent of one's cases. The failures fall into two groups: (1) the somewhat inert uterus that stops work when any analgesia is given; (2) the patient that makes such rapid progress that the first stage drugs do not have a chance to act. One can always relieve the second stage pains for you can always anesthetize your patient. If the progress of labor then stops it is comparatively simple to deliver the patient artificially.

Medical Arts Building.

IS POLIOMYELITIS A "CONTACT" DISEASE?

H. McG. ROBERTSON, M. D., Philadelphia, Penn.
U. S. Public Health Service.

To discuss this problem it is necessary to consider the methods of spread of the communicable (parasitic) diseases of man. This may be done briefly. It is assumed that such diseases have a living cause, and the term "parasitic" as herein used refers to such living organisms regardless of their classification or size. Parasites find their way from infected to non-infected hosts either directly or through intermediate agencies. Direct transfer is by actual inoculation, as in the venereal diseases and in the bites of infected animals, or by close association of persons, as in the case of smallpox, measles, and the common cold. The intermediate agencies in the transfer of the disease-producing parasites of man are of two classes only. These are food and insects. In thus limiting the intermediate agencies involved, such vehicles of transfer as the fingers, droplets of sputum, and others, are considered as mechanical factors in direct transmission. A large number of insects and a great variety of foods are implicated in the intermediate parasitic transfer. The word "contact," as here used in quotation marks, implies only such relatively close personal association as seems necessary for the spread of measles or the common cold.

Consideration may first be given to the diseases usually looked upon as contagious. Those diseases which are spread only by "contact," as this term is here defined, may be looked upon as of two classes: those of unknown causation, and those in which the exciting cause is supposedly known. In the first group, the causative agent apparently does not live outside the human body even in the lower animals. These diseases are smallpox, chicken pox, mumps, measles, German measles, whooping cough, influenza and the common cold. They are the contact diseases par excellence, and casual close contact is sufficient for the transference of the exciting cause from an infective person to one who is not immune. The "contact" here may embrace actual touch, as in a hand-shake, droplet infection, freshly contaminated dust and freshly infected fomites. The infective agent here proceeds by these means in the living state in small numbers, probably, from one human host to another with no multiplication in numbers en route; and any agency involved in the transfer, as the fingers, a droplet of sputum, the clothing, or what not, is simply a mechanical factor in transferring quickly a living parasitic organism from one host to another, the parasite having no ability to exist for prolonged periods outside of such a host except under unusual conditions. These are "virus" diseases, and the causative parasites have not been seen.

The second group embraces the pneumonias, epidemic cerebro-spinal meningitis and pneumonic plague. The causative organisms here are supposedly known and it is the general

belief of the profession that contact is the only —or certainly the chief—method involved in their transfer from the infective to the susceptible. The three organisms here concerned may be cultivated in the laboratory and all may affect other animals than man. They may and do live outside of human hosts, thus giving rise to an intimation that intermediate agencies may at times be involved in the transmission of these diseases. Leaving aside this possibility, there are given above all those general diseases which are indisputably spread by "contact" of individuals one with another. There is no occasion or opportunity for an increase in numbers of the infecting parasites outside of the human host in these "contact" diseases. The heat of Summer and the heat of the Tropics play no part in the multiplication of these causative parasites. If heat plays any part in their transference, it must be to diminish their numbers and their virulence, and the incidence of the diseases caused by them. The temperature of the human body, being practically a constant factor in all seasons and climates, these parasites are not involved in seasonal and climatic changes. The presence or absence of the diseases caused by them is entirely accidental or casual in any community except as vaccination against smallpox may limit this disease, and as the presence of bubonic plague may make for an occasional outbreak of the pneumonic form. If in the Temperate Zone these diseases show regularly higher incidences in certain seasons, these are always such as are influenced by a closer association of the populace at the times of higher incidence. Such closer associations are voluntary for purposes of comfort and pleasure in Winter, and compulsory for school attendance in all months of the year except the Summer months. It is needless to state that not one of the diseases above mentioned has a characteristic high hot weather incidence, even though there may be Summer outbreaks of any of them. There is nothing to indicate that the Summer makes for an increase of these diseases. Quite the reverse is true. Contact of persons is at a minimum during the Summer and early Fall and the incidence of all of them is low accordingly.

There are other diseases of man of greater or less significance, general and local, which are transmitted only by contact; and this contact is in reality an inoculation. These have no maximum seasonal incidence—certainly not a high Summer incidence. They are syphilis, yaws, gonorrhea and chancroid.

Man contracts certain diseases from the lower animals directly, either by inoculation or by "contact." Such are rabies, anthrax, tetanus, actinomycosis, glanders, foot and mouth disease, psittacosis and rat-bite fever. The "contact" in these is seen principally in glanders and psittacosis. These diseases are seasonal in man only as they may be seasonal in the animals involved. If rabies in man is a Summer disease, as popularly supposed, it would be related to a Summer incidence in dogs. This might, in turn, be related to the Summer presence of ticks or fleas. A high hot weather incidence in this group due to "contact" is lacking.

There are several supposedly communicable diseases of man in which the mode of transmission is entirely obscure. Contact, in all of its meanings, is, of course, suspected, as are intermediate agencies. If "contact" exists as a factor, it does not make for a high Summer incidence. Among these diseases are leprosy, rheumatic fever, acute follicular tonsillitis, and erysipelas

Trachoma, pink eye, granuloma inguinale, furunculosis, septicemia and Vincent's angina are diseases of man which are indefinite in many ways. Apparently confined to the human species, there may be an element of "contact" as also of intermediate transmission. Yet there is no seasonal variation of consequence—certainly no high Summer incidence.

In the diseases thus far mentioned there is no evidence pointing, directly, to transmission by insects or foods. Following are several groups which are associated wholly or in part with food or with insects—taeniasis, ascariasis, uncinariasis, trichiniasis, schistosomiasis, guinea worm, whip worm and the pin worm are infections or infestations of man by animal parasites which have little or no bearing upon a discussion of contact infections. Man acquires these parasites principally through foods, although some of them occur through skin implantation.

There are certain other diseases of man, of known and unknown causation, wherein there is an element of "contact" involved. The percentage of cases spread through "contact" varies from an almost negligible one to a relatively high but undetermined figure. Some of

XUM

these diseases are transmitted almost entirely in nature by the intermediate agency of food either from man to man or from animal to man. These are typhoid fever, cholera, dysentery (bacillary and amebic), Malta fever, septic sore throat, and the infectious diarrhoeas of childhood. None of these are insect borne in the ordinary meaning of this term. Contact in these diseases accounts for a minimum of the cases, and as such is accidental or occupational. The maximum incidence of these diseases is in the hot months in the Temperate Zone, due to the influence of heat upon the growth of their causative organisms in media outside the human host. These, with certain insect borne diseases, are the only ones which show a high Summer incidence—poliomyelitis for the moment being excepted. Three other diseases of this group are diphtheria, scarlet fever and tuberculosis. In these there is no insect vector involved. Foods are often associated with sharp outbreaks of diphtheria and scarlet fever, while some cases of tuberculosis are definitely associated with milk from tuberculous cows. It is customary to attribute by far the larger portion of the spread of these three diseases to personal "contact." The chronic nature of tuberculosis makes comment on its seasonal relations of no account. Certainly there is no high Summer incidence. In diphtheria and scarlet fever, however, where there is believed to be a very large element of "contact," there is no evidence of a high Summer incidence as an outstanding characteristic. In fact, the reverse is more nearly true. The outbreaks of these two diseases due to infected foods, however, are usually of Summer origin.

The group of diseases next to be considered, the last group, holds no element of personal contact in present day beliefs. Not many years ago students of some of them could cite definite instances of contact both near and remote. These observers were intelligent, sincere and entirely convinced that yellow fever and bubonic plague were transferred directly from person to person. Besides yellow fever and bubonic plague, the diseases here referred to are: malarial fever, dengue fever, trench fever, relapsing fever, filariasis, trypanosomiasis, leishmaniasis, tularemia, the typhus fevers (including Brill's disease, Rocky Mountain spotted fever, and those sporadic cases in the Eastern United States transmitted by fleas), pappataci fever and infective jaundice. All of these are spread from one human host or animal host to other human hosts by insects of various species, although the last named is not usually considered to be so transferred. Infective jaundice, apparently a variation of yellow fever found both in hot and cold countries, is supposedly transferred through foods infected by the urine of rats which have this disease. The seasonal distribution in the colder countries corresponds to the "flea season," and it seems more logical to assume that it is spread by the bite of a rat flea than through the urine of the rat. For this reason it is included in this group. The maximum incidence of infective jaundice in the Northern United States is in the Summer and early Fall. Yet, contact of persons is not here considered in the explanation of its spread,—rather, as stated, a food transference of the spirochaete from rat to man. The diseases in this group show a seasonal maximum in the Temperate Zone exactly as do their insect vectors. They are present in any locality only as these vectors may be present, and as these may have access to infected animals or men in communities where there are susceptible persons. Some of these diseases do not occur in the Temperate Zone. The typhus fevers may—or must—have a higher warm weather incidence if the insect vector is the flea or the tick. If the louse is involved, a cold weather maximum may be expected because of heavier louse infestation of certain types of persons in a season where habits of cleanliness are difficult to practice because of the cold. So with louse borne relapsing fever. The diseases in this group which always attain their highest maximum in the United States in the late Summer and Fall are yellow fever, bubonic plague, malarial fever, tularemia, dengue fever, pappataci fever, filariasis and infective jaundice. They attain this maximum because their insect vectors attain their maximum numbers at this same Season. There are here seen diseases which are essentially of the warmer months. There is no Winter incidence, unless in bubonic plague, in those warmer sections of the United States where the flea may not disappear or reach its innocuous minimum. There is no "contact" of consequence even though persons may become infected through handling cultures or diseased animals.

There has been given this brief summary of the usual methods of transmission of the com-

municable (infectious, parasitic) diseases of man, with especial reference to the matter of "contact" as it was involved in each disease or in each of several groups. The statements set forth are so elemental as to suggest the propriety of an apology at this place. It is, however, not possible to discuss the matter of the spread of poliomyelitis without having these facts clearly and freshly in mind. What has been brought out very definitely in the above review is the well known fact that contact diseases are not warm weather diseases; and the converse of this—that warm weather diseases are not spread by contact except as this may be accidental or occupational. Apparently this review furnishes a strong reason for doubting the "contact" theory of the spread of poliomyelitis. The outstanding fact in the epidemiology of poliomyelitis is its high incidence in August and September. This is not occasional but well nigh universal. It is in no way comparable to the infrequent Summer outbreaks of such actual "contact" diseases as whooping cough and measles. In fact, no disease of man shows a more definite and consistent seasonal maximum than does poliomyelitis Next to its seasonal incidence the most striking fact in the epidemiology of poliomyelitis is the age incidence—principally in children under fifteen years. This is the school age, and infancy. A glance at the relation of this disease to schools is interesting and presents a convincing argument against placing it in the "contact" group. Schools end their terms in June and reopen in middle September. Poliomyelitis usually makes its appearance in July and increases until middle September. The beginning of the decline of nearly all outbreaks is coincidental with the opening of schools In epidemic years when it is thought necessary to delay the Autumn sessions, a decrease in cases as the Fall advances is often attributed to administrative measures advising against the congregating of people. Yet there are many years with a few cases in evidence where schools begin at the appointed time. Here, too, there is seen that gradual disappearance of the disease. There is no spread, as should be expected if the disease were contagious. It is most difficult to believe that a disease which is contagious and which is confined largely to children of school age, could begin its upward trend shortly after the June closing of schools and begin its decline almost exactly at the date of their Fall reopening.

Another reason for disbelieving the contact theory in poliomyelitis is found in its family and community incidence. In these as in its seasonal incidence, this disease closely resembles typhoid fever. It resembles typhoid even in showing an occasional Winter case, or small outbreaks. In poliomyelitis there is not often found more than one case in a family. In this, the disease resembles not only typhoid fever but also the insect borne diseases—certainly, it in no way presents the same family and community incidence as do those typically contagious diseases represented by measles. An opinion which, as the above, carries a belief in the relative rarity of this affection, will not be received with sympathy at this time.

More and more the opinion prevails that the known cases of poliomyelitis in an outbreak of this disease represent only a fraction of those actually occurring. Four cases of "infantile paralysis" will be said to indicate a possible total of forty cases of poliomyelitis. Only one known patient in a family of six children may seem to many an indication of lack of contagiousness. Acceptance of the belief that the other five have at the same time had unrecognizable attacks, may on the contrary be held to indicate a high degree of contagiousness. In water borne epidemics of typhoid fever, a relatively small percentage of exposed persons contract the disease. In milk borne outbreaks the percentage is much higher. In an instance coming under the observation of the writer, ten members of a family of twelve were ill at the same time from typhoid fever contracted through drinking milk infected by the convalescent mother. Only a boy of ten years escaped the disease. In Asiatic cholera, the incidence from drinking infected water is markedly greater than in typhoid fever. This was shown in the Hamburg epidemic, where as many as one thousand cases of cholera were reported daily at the height of the outbreak. Considering this comparison of water borne typhoid fever with the milk borne epidemics and with cholera, account must be taken of the ease or difficulty with which infections may be contracted. In typhoid fever nearly all persons are susceptible, but the disease is not inaugurated until the parasite establishes itself in the lymphoid tissue of the intestinal wall. This tissue being beneath the epithelial lining, there are many difficulties in the way of the parasite attaining its desired goal. This is especially so in the case of infected water

XUM

where the bacilli are relatively few. The laws of chance here operate in favor of the host against the parasite. With infected milk—a pure culture of the bacillus—the chances of the bacillus are greatly improved. In cholera, the chances are with the vibrio. To be swallowed by the host is to land in an environment ready made for its life and multiplication. The intestinal contents soon become a pure cholera culture and the disease is inaugurated forthwith. Nothing is known of the parasite of poliomyelitis. Assuming a universal susceptibility to the disease and an implantation of the parasite as easy as, or easier than in the case of cholera, infection of all exposed persons may as readily be due to food or drink as to "contact." Admitting that all exposed susceptible children contract poliomyelitis in either a mild or severe form, one need not thus accept "contact" as an explanation of the phenomenon. The same need to explain the seasonal incidence remains, however, whether direct or indirect transfer of the parasite occurs. The determination of the occurrence of mild or missed cases in an outbreak is only of academic importance when the matter of the seasonal incidence of poliomyelitis is considered. The belief that poliomyelitis *must* be a contact disease because the virus is found in the nose and throat of "cases" and carriers and can thence be transferred to certain lower animals, is not convincing. The parasite may be on these mucous membranes and yet require to be "inoculated" before the disease is inaugurated. In fact, such a procedure seems to be necessary in infecting monkeys in laboratory experiments. These animals do not seem to contract poliomyelitis merely by "contact." Evidence has not been set forth showing that all monkeys in any laboratory acquire an immunity to poliomyelitis through mild or missed cases after one of their number is infected by means of inoculation through its nasal mucosa. The parasite of this disease has lately been demonstrated in the intestinal tract, and certainly, at times, it reaches such inaccessible tissues as the spinal cord. So little is known of the "viruses" and the manner in which they attain their desired goals in human hosts that it is not well to be dogmatic upon a "contact" explanation based on their presence upon exposed skin or mucous surfaces. Further evidence that poliomyelitis is not contagious is the absence of the disease in laboratory workers. To state that all adults are immune is, in the absence of proof of immunity, to beg the question. Apparently, the chief evidence in favor of the "contact" theory is experimental. Observation and reason point definitely away from this method of spread.

Having set forth reasons to show that poliomyelitis is probably not a "contact" disease, brief mention may be made of its possible relations to food or to insects. As stated, this disease in many ways resembles typhoid fever. Seasonally, it resembles typhoid and the dysenteries—bacillary and amebic—in the Temperate Zones. Typhoid fever and the dysenteries prevail here in the warm months and are widespread in the Tropics. Poliomyelitis becomes rarer the nearer the Equator is approached. In this it differs sharply from the intestinal diseases just mentioned. This infrequency of poliomyelitis in the warmer countries of the world is an interesting phenomenon. Reference to the diseases mentioned herein as of high Summer incidence in the Temperate Zone will show all of them to be either essentially tropical in their nature, or if occurring in the Summer months here, they may be widespread in the Tropics and found there at all seasons. Poliomyelitis shows a high Summer and early Fall incidence in the Temperate Zone, and a practical absence in the Tropics, being thus different from all others of its class in this respect. Search for a connection between this rarity of poliomyelitis in the Tropics and its relation to food reveals only one probable link. All other diseases of high Summer incidence in the Temperate Zone are spread either by insects or by food. And all those of the food borne class, except Malta fever, may be spread through the agency of water. If poliomyelitis were water borne, it should be more prevalent in the warmer than in the colder countries. If, however, it should be milk borne, an explanation of its decrease toward the Equator may be at hand. Poliomyelitis and the use of cow's milk decrease *pari passu* as one approaches the Tropics. Malta fever exists in semi-Tropical regions where goats' milk is used, but is not more widespread than the use of milk would allow.

Attention may be invited to another food besides milk, often used in a partially raw state. This is the egg, and its use is more general in the warmer months of the year. Fowls suffer from nervous system diseases, and the connection between these and the poliomyelitis of the human has often been studied.

Fowls are known to harbor parasites of the spirochaete variety, and these no doubt are more prevalent in the warmer months. Other raw foods—fruits, vegetables, oysters, etc., may be considered, but the season of the year and the youthful status of most patients must be taken into account when these are considered in possible relationship to poliomyelitis. They will no doubt be ruled out as factors in the spread of this disease. The possible relation of insects to the spread of poliomyelitis may be briefly intimated. There are undoubtedly Winter cases of this disease. The extremely cold Winter weather of certain Northern countries should definitely rule out the fly, the mosquito and the tick. The bedbug and the louse are not predominantly Summer insects, and the status of many families affected make it difficult to think these insects are possible vectors. There remains the flea to consider. Common knowledge as well as flea surveys made by officers of the U. S. Public Health Service place the season of maximum incidence of fleas in the Northern United States in August and September. In October there is a falling off in numbers but there is not an entire disappearance of these insects in the Winter. In New York City the average Winter count of rat fleas was forty-eight fleas per hundred rats. It must be that in certain protected places they are more numerous. Should it develop that the flea transmits poliomyelitis, the occasional Winter presence of this insect would accord with the occasional Winter case of the disease. The presence of rats, cats or dogs—or all of these animals—in a home is not unusual, and children rarely complain of flea bites as they do of the stings of mosquitoes. A rat-flea explanation of the transmission of poliomyelitis makes more understandable the fact that the disease may be confined chiefly to certain sections of a city, as recently in Philadelphia. No large city is ever equally infested by rats in all sections. Acceptance of the flea theory of transmission tends to confirm a belief that the family and community incidence of poliomyelitis is as it appears to be rather than a widespread, mild affection with occasional spinal cord involvement. In any outbreak of the insect borne diseases, especially those related to fleas, the percentage of susceptible persons acquiring the infection is relatively small. The rather rapid decline of a poliomyelitis outbreak in October and November is somewhat more suggestive of a flea association than of a connection with foods. The manner of transmitting this infection to laboratory animals is reminiscent of inoculation by an insect vector. Recent work of the Public Health Service has shown that certain heretofore indeterminate fevers of the Southeastern United States are a variety of typhus fever contracted through the bite of fleas. The writer in this article suggests that the infective jaundice which is occasionally seen in this country is transmitted from the infected rat to man through the bite of the rat-flea. Bubonic plague, as it occasionally occurs in the warmer sections of the United States, is of course of flea origin. Thus, the virus of typhus, the bacillus of plague, and the spirochaete of infective jaundice—three forms of the parasites of man—are transmitted by this insect. To believe the virus of poliomyelitis is spread by the flea is not beyond the realm of the reasonable. No convincing suggestion is at hand as to why the more abundant fleas of warmer countries are not there associated with poliomyelitis—perhaps because the Xenopsylla cheopis does not transmit the disease, or because the rats of warmer countries do not harbor the parasite of poliomyelitis.

Several years ago a paper was submitted to certain workers in this field embodying some of the thoughts set forth above. In due time the paper was returned with comments. The writer was stated to have ignored the large body of experimental work that had been done upon the subject of poliomyelitis. This was in a way correct. That the virus of the disease could be transferred from man to certain lower animals, and through those lower animals preserved indefinitely; that the causative agent had possibly been grown as the "globoid bodies"; that mild cases and carriers had presumably been detected, and that the serum of recovered persons had been thought by some to be curative—were well known and held as of some importance. However, it was also recognized that in spite of these discoveries this disease came and went as of old. No one knew whence it came, or why it went, and nothing can yet be done to control it. That the virus is abiding for a time in certain laboratories is of little consequence. The art of the research worker has evolved certain facts and produced certain results. But this is art. It is nature that confronts the practitioner of medicine and the parents of the victims of poliomyelitis. Nature has made this a

disease of Summer, and in so doing has probably not reversed her usual orderly processes. If this were a "contact" disease, nature would have remained logical and the high incidence would, no doubt, have been in the colder months. There is a definite reason for this seasonal incidence of poliomyelitis and this is most probably not explained by "contact." It is possible that the writer wishes it to be proved that poliomyelitis is not spread by contact; this, because of the fact that food borne and insect borne diseases are largely controllable, while the "contact" diseases are, with the exception of smallpox, almost entirely beyond the control of man. It seems that as the years pass epidemiologists and administrative officers in this field center their attention more and more upon "contact." Advice at times of increase in poliomyelitis has to do almost altogether with the avoidance of "contact." It is believed that equally as much stress should be laid upon avoiding raw foods and upon protection against all known insect vectors of disease. The relatively short season of high poliomyelitis incidence would make the use of boiled foods no great hardship; and an intensive campaign against insects would seem financially justifiable under the existing uncertainty as to the mode of spread of poliomyelitis. Certainly, its distressing after-effects make all possible measures of control of great importance. It is felt that a too concentrated view of "contact" may have resulted in the neglect of other promising fields of administrative and investigative endeavor.

225 *Chestnut Street.*

SOME ESSENTIALS IN THE PRE-OPERATIVE AND POST-OPERATIVE TREATMENT IN EXODONTIA.*

HARRY BEAR, D. D. S., F. A. C. D., Richmond, Va.
Dean and Professor of Exodontia, Medical College of Virginia, School of Dentistry.

The practice of exodontia is a surgical procedure which is now generally recognized. The fundamental principles involved in general surgery are equally applicable in the successful practice of exodontia. The removal of teeth constitutes a surgical practice and one which is performed, perhaps, more frequently than any other surgical operation. In spite of the universal practice of exodontia and the possible unfavorable sequelae which may arise, it is gratifying that only a small percentage of cases give rise to complications. This does not mean, however, that we can minimize the responsibilities involved, for the utmost care in the treatment of every case must be exercised.

We may assume that from time immemorial man has been subject, more or less, to diseases of the mouth which have made necessary the removal of teeth. It is during the past fifty years or so that the greatest progress has been made in this field. The improvements which have effected these changes are the administration of anesthetics, both local and general; the use of the roentgenogram, the principles of asepsis, and the perfection of surgical technic. The advances made in surgical procedures have been materially enhanced by the vast improvement made in the construction of instruments.

Pre-Operative Considerations

The mouth in general is not the most favorable field for surgical intervention. Because of the various anomalies and uncertainties which may be encountered, it is essential that a thorough diagnosis be made as a pre-requisite pre-operative consideration. This should include clinical and X-ray examinations of the field of operation. Visually, one should observe the stability of the tooth or teeth to be removed, as well as that of the adjacent teeth. All unattached appliances in the mouth should be removed. The roentgenogram will reveal pathologic changes and the extent of involvement, as well as the size and curvature of the roots of teeth.

The oral cavity is constantly infested with micro-organisms, and, because of this, a feeling exists among some practitioners that the mouth cannot be rendered sterile. It is impossible to sterilize or maintain sterility in the oral cavity for any length of time. Certainly a reduction in surface bacteria may be accomplished, and all means at our disposal should be used to cleanse the mouth in general before any operative intervention. General spraying of the mouth with a mild antiseptic solution and swabbing of the teeth and gums will do much to remove gross septic material so frequently found deposited about the teeth. Calculus and other debris in the field of operation must be removed.

In cases of acute infections, such as in ulcero-membranous gingivitis, remedial measures should be instituted to minimize the infection

*Read at a meeting of the Eighth International Dental Congress, Paris, France, August 3-8, 1931.

before operating. In such instances, vigorous cleansing with hydrogen peroxide and with solutions of sodium perborate will tend materialy to allay the acute symptoms.

Another complication frequently met with is infections associated with erupting and impacted third molars. These cases are often accompanied by trismus. Thorough cleansing of the oral cavity and the application of heat externally should be instituted. As far as it is practical, surgical intervention should be deferred until the infection is well under control. In every case the operative field must be cleansed and strict asepsis must be observed to guard against carrying extraneous infection.

In discussing the pre-operative care in exodontia, it is assumed that the practitioner has taken into consideration the general health and welfare of the patient. It has also been determined whether or not extraction is indicated and if the patient can withstand the shock of operation. It is not presumed that the dentist is to make a complete physical diagnosis, but a few well prepared questions may elicit enough information to determine whether a physician should be consulted in the case. Proper consultation and cooperation with our medical confreres will arouse added confidence on the part of the patient.

Post-Operative Considerations

It is easy enough to say that with proper preliminary care and with the employment of all the refinements of surgical technic, we should have little or no post-operative complications. The fact remains, that all pre-operative treatment is instituted to diminish and prevent, as far as possible, the need for post-operative care. This after-care, however, is a necessary part of the treatment of the case, and is essential for a satisfactory prognosis.

Post-operative care may be divided into two two main divisions: local and general.[1] Local post-operative treatment of mouth wounds should consist of simple non-traumatizing procedures. Advise the patient not to wash or rinse the mouth for at least the first twelve hours. This may be more indelibly impressed immediately after the operation has been completed by not permitting the patient to wash his mouth while in the office. Explain to him that the less the wound is disturbed by too vigorous washing, which often causes the loss of the blood clot, the less bleeding there will be, and therefore the quicker and more complete the recovery. It is to be observed in this connection that in those patients with a diminished flow of saliva, the wounds heal more readily, while it seems that in cases of aptyalism the results are even more favorable. When excessive saliva apparently interferes with healing, atropin may be advisedly used to advantage. As a rule, the external application of ice compresses is ordered not only for relief of pain, but also because the cold tends to lessen edema and allays the inflammation, thereby reducing the heat necessary for the proliferation of bacteria. In cases where suppuration or extensive inflammation is already present, the application of heat is preferable. There should be no further local attention to the wound itself after the operation has been completed, unless this is warranted by complications which arise and require it.

Under general care, the patient should be advised to rest the operative field as far as it is practicable, while general rest of the patient is likewise conducive to hastening recovery. Laxatives may be prescribed in order to facilitate proper elimination. A light diet, with more than the normal amount of fluid intake, is advised. For the relief of pain, sedatives are prescribed. Milder remedies are, of course, first used; if these do not suffice, hypnotics may be necessary. There are many drugs available, and the operator should use those which seem to serve his purposes best.

Regardless of the simplicity or gravity of the operation, the patient should be seen on the first, second or third day, this depending on the nature of the case,—if not for treatment, at least for observation. If the wound looks satisfactory, nothing is done to disturb the healing process. Gentle spraying of the surface of the wound with a mild antiseptic is permissible. The use of a counter-irritant on the adjacent tissues, if indicated, is not objectionable. The practice of continually disturbing a wound with instrumentation or with strong drugs cannot be too severely condemned. Later, when satisfactory healing is apparent, the patient may use a mouth wash for its cleansing effect, and, I might add, for its psychic effect. As washes are countless, there will be no difficulty in appeasing the whims and fancies of the most exacting dentist and fastidious patient.

How. now, are we to treat the perverse wounds, wounds that do not heal properly?

XUM

We all know that, in spite of the strictest observance of asepsis and adherence to the fundamental principles of surgical technic, and with traumatism reduced to a minimum, we still have wounds that break down and are annoying to both patient and operator. This is usually accompanied by persistence of pain and local inflammation. This condition, or the so-called "dry socket," is sometimes due to the use of hydrogen peroxide. In my opinion, this drug is not indicated as a post-operative wash, since it acts as a blood-clot solvent.

The condition of delayed healing having developed, we must meet the situation with proper treatment. Cautious irrigation of the wound with mild antiseptics is carried out to dislodge any debris that may have been retained within the confines of the operative field. Useless granulation tissue should be removed, and the application of a gauze dressing with sedative drugs will, in most cases, afford relief. The dressing is changed as often as conditions require until sound healing has again been resumed. At this stage of the case, the application of heat externally usually affords the greater comfort.

When post-operative treatment is complicated by general bodily disturbances, the problem looms larger and demands more exacting consideration. For instance, prolonged bleeding, as found in hemophilia, is a subject which might in itself occupy the space and time of another paper. Suffice it to say that, in known cases of hemorrhagic diathesis, constitutional treatment, under the care and with the co-operation of the patient's physician, is instituted before attempting any surgical operation. Mere superficial bleeding may be arrested by placing some gauze over the orifice of the wound and having the patient keep the jaws closed over it for from fifteen to twenty minutes. If bleeding is somewhat more persistent, firm packing of the sockets with gauze will often be sufficient. If the bleeding is from a part of the alveolar process and the field can be readily approached, it may be checked by crushing the bone at this point with a blunt instrument. Suturing of the wound will be of material aid. These methods are tried before resorting to the use of drugs, the majority of which have a deleterious effect on the supporting and adjacent tissues. When bleeding is prolonged and becomes alarming, a combination of all of these forms of treatment must be employed. The administration of morphin and atropin is a valuable adjuvant in the treatment of hemorrhage.

Conclusion

Every case should receive the same careful attention in pre-operative and post-operative treatment as in the performance of the operation itself,—care which is not to be relaxed until the operator is satisfied and the patient discharged. We must not forget that there is more to be considered for the benefit of the patient than the mouth into which we daily peer with so much concern and interest. A few minutes of explanation in simple, non-technical terms, instructing the patient in what you expect of him, will add materially to the chances of recovery. Constant diligence and intelligent attention must be exercised in the treatment of cases from the beginning to the end.

Reference

1. Bear, Harry: Post-Operative Treatment. *Journal of the A. D. A.*, September, 1928.

Professional Building.

THE PRESENT STATUS OF MALARIAL THERAPY IN GENERAL PARALYSIS.*

P. G. HAMLIN, M. D., Philadelphia, Penn.

By way of apology for presenting to this group a subject which may be of special rather than of general interest, I will say that we have recently used this treatment with success on two patients at Friends' Hospital. Further, a procedure whose discovery and subsequent development brought to its author the Nobel Prize for Medicine cannot be without interest to doctors in general.

In 1917, Wagner Jauregg, of Vienna, inoculated with malaria nine cases of general paralysis, variously called paresis, dementia paralytica, and general paralysis of the insane. Three of these were at work four years afterward and showed no sign of the disease. After treating and following up for several years a large series of cases, Wagner Jauregg's results were sufficient to obtain for him, in 1927, the Nobel Prize for Medicine. From Jauregg's clinic in Vienna Gerstmann reported 400 cases treated, with 33 per cent recovered and 14.25 per cent improved.

The treatment was subsequently taken up rapidly and with enthusiasm—enthusiasm, pos-

*Read before the Northeast Branch of the Philadelphia County Medical Society, at Frankford Hospital, April 7, 1933.

sibly to some extent due to the hitherto gloomy outlook presented by the treatment of general paralysis. Kirby, at the New York Psychiatric Clinic, reported 156 male paretics treated, with 33 per cent full recoveries and 17 per cent improved; Kirschbaum, of Hamburg, 196 patients, with 31 per cent complete and 21 per cent moderate remissions; Caldwell, in London, with 579 patients had 29.7 per cent complete remissions and 13.9 per cent of patients improved.

The selection of the patient is perhaps the most important single factor in securing favorable results from this form of therapy. Selection of a pure strain of tertian malaria is also important, as certain strains are accompanied by high mortality.

In the United States infection has been accomplished either by intravenous or subcutaneous injection of blood from an individual having paroxysms and showing the parasite in the blood. In England infected mosquitoes have been used. The method of injection by syringe is much more certain and is more easily controlled. The quantity of blood used is from two to four c.c. It is taken directly from the veins in the ante-cubital space and injected immediately into the recipient subcutaneously or intravenously. I have once used citrated blood, transported from New York City to Williamsburg, Virginia, a distance of approximately 400 miles, and produced a successful inoculation. The incubation period varies, according to Henderson, from three days to four weeks in the subcutaneous, and from two to twenty days in the intravenous route. Our own last case went fifteen days from day of injection to the first elevation of temperature. He was injected by the subcutaneous route.

The bouts of pyrexia reach 104 degrees Farenheit or higher. The number of paroxysms the patient is allowed to have varies from eight to sixteen, according to the reaction of the patient; twelve or fourteen being a good average. It is doubtful if less than eight would have any permanent influence on the course of the paresis. Here it may be proper to interject that this treatment should never be attempted except in a hospital where skilful nursing care is available.

We have given our own cases fifteen minims of tincture of digitalis three times a day throughout the period of the paroxysms. This has at times been increased to thirty minims when necessary to support a falling systolic pressure. Our criteria for terminating the treatment have been: the general condition of the patient, the blood pressure (particularly a rapidly falling diastolic), and a hemoglobin lowered beyond 60 per cent.

The blood pressure is taken routinely twice a day, and, if falling, every four hours. If the diastolic pressure continues to fall after the patient comes out of the paroxysm, it is wiser to terminate the treatment. The blood pressure, both systolic and diastolic, naturally falls during the algid stage. If it does not rise again when the patient should react, it is a definite danger sign. A hemoglobin of 50 per cent is sufficient ground for terminating the treatment forthwith. The extent of infestation of the red cells as shown in stained blood films is also a criterion which can be used.

Treatment is terminated by giving quinine sulphate, gr. x t.i.d., for one week. Ordinarily after the patient has had his course of quinine and begins to build up again, it is wise to follow the quinine with tryparsamide, grammes three, in ten c.c. of distilled water intravenously. This treatment is given at weekly intervals for eight doses. The eye grounds and visual fields should be examined by an ophthalmologist before this is begun and should be reexamined after every two injections, and the urine should be checked.

The mortality of malarial therapy in paresis is put by Kirby at 10 per cent. Other observers give 11 per cent, or 12 per cent, or figures closely approximating. It is safe to assume it at 11 per cent. Untreated paretics in institutions have an annual death rate of 33 per cent.

The earlier, after symptoms appear, that the treatment is instituted, the more promising the outlook. The clinical type affects the prognosis. The most hopeful are the maniacal and grandiose; the least hopeful the dementing types. As to the efficacy of early treatment, Nicol states that in cases in which malaria therapy was instituted six months after symptoms ten times as many remissions were obtained as in those in which it was deferred until eighteen months after symptoms. It is, of course, often difficult to say just when the symptoms of general paralysis begin. The history is most frequently defective, and the onset of the disease usually insidious. In contrast to plain cerebral syphilis, one observer has expressed it "Paralysis glides in; cerebral syphilis jumps in." The exact diagnosis is to be made by the close correlation of the physical

signs and symptoms with the serological findings. Finding a positive Wassermann on the cerebro-spinal fluid does not necessarily mean general paralysis.

The four clinical types of general paralysis usually described are: (a) grandiose, (b) maniacal, (c) depressed, (d) simple dementing. As has been said, the greatest number of recoveries are in the maniacal, agitated and grandiose types, the least in the simple dementing. A point I think proper to stress here is that a convulsion is often the symptom that ushers a case of general paralysis on the hospital stage. An epileptiform seizure occurring for the first time in an individual over thirty-five years of age should lead one to think of syphilis and of cerebral arteriosclerosis.

Following malarial therapy, improvement should be noted within three months, and, unless present within nine months, will not occur. According to Nicol, four species of malaria have been employed: plasmodium vivax (benign tertian), plasmodium malariae (quartan), plasmodium falciparum (malignant tertian, aestivo-autumnal), and more recently plasmodium ovale. Benign tertian is used in the larger number of cases. Malignant tertian is used, as a rule, only when a second inoculation is given. Quartan, owing to the longer interval between paroxysms, does not produce the prostration the tertian does and is preferred for use in older and debilitated people should they be inoculated. Plasmodium ovale is mild and has a tendency to recover spontaneously. Our own cases have been inoculated with tertian, which I obtained at Harrisburg, Pennsylvania, from my friends, Drs. E. M. Green and R. J. Ridgeway. To Dr. Ridgeway I am indebted for much good counsel in handling our cases.

Transitory hallucinations have been observed following malarial treatment. They have occasionally appeared following the administering of quinine or injection of salvarsan when the malaria is terminated. It is possible they are due to one or the other of these drugs. Their appearance is rare and they usually disappear quickly.

A safety device in the management of malarial therapy is the interruption of the paroxysms with a single dose of quinine, five grains. This procedure has much favor with the Vienna workers.

Change in the serological findings is not at all concomitant with improvement clinically. There is usually no change in the Wassermann, or colloidal gold curve of the spinal fluid within three months after treatment. About two years after completion of the treatment 50 per cent of patients have negative Wassermann tests on the spinal fluid and a normal cell count. Thirty-three and one-third per cent will have a normal colloidal gold curve. If the malaria is followed by a course of arsenicals, the blood Wassermann may become negative. There is little or no change in the physical signs. Pupillary changes and reflex phenomena are not affected. The improvement is therefore almost entirely clinical and is accompanied by marked improvement in the patient's general condition. In those patients in whom there is little mental improvement and who remain in the hospital, there is such marked improvement in their general condition that they are much less prone to infections, bed sores, slow healing wounds, etc.

The spinal fluid Wassermann in one of our own cases was still positive after the patient had been out of the hospital over three months. The blood serum still gave a positive Wassermann six months after the treatment was completed. The other case left the hospital before a three-month period was up, and so far I have been unable to get his fluid.

Reid, of England, has excellent statistics on malaria-treated paretics extending over a period of eight years. His series of 225 cases is large enough to enable one to make deductions and draw conclusions. After five years had elapsed following the discharge from the hospital, 24 per cent were remaining at home, well. The same percentage was able to work. Their occupations ranged from railroad engineering, laboring, through French polishing and painting. In the period from six to nine years after leaving the hospital 12 per cent of those treated were well and living at home. As to expectancy of life of Reid's malaria-treated paretics, 76 per cent were living at the end of one year and 22 per cent at the end of nine years. One has but to contrast this with the statements in textbooks of twenty years ago, as to the expectancy of life. It was then usually given as from three to five years.

We have to confess that this treatment is based almost entirely on empirical knowledge. T. D. Power states, "The treatment of diseased conditions by means of induced pyrexia is now so frequently carried out that it is surprising how little we know of the biological

processes involved. "It is not an exaggeration to state that the beneficial effects of malaria in general paralysis are as gratifying as those of liver in pernicious anemia, and insulin in diabetes, but we still wait a satisfactory explanation of its mode of action. An attempt in this direction was made by Eddison, who observed a failure of leucopoiesis in untreated cases of paralytic dementia which he attributed to degeneration in reticulo-endothelial system. He considered that 'in general pyrexia was associated with leucocytic reaction and this resulted indirectly in reticulo-endothelial stimulation.'"

The inference in Power's paper is that some of the good results observed in malarial therapy are due to the anemia produced. This anemia calls forth from the blood-forming organs more primitive and protective mechanisms than are ordinarily needed to protect the body under conditions of normal life, but which may be necessary when the patient has such a disease as general paralysis. Although the exact mode of the production of the good results in this form of treatment is not known, the good results themselves can no longer be questioned.

BIBLIOGRAPHY

A Text-Book of Psychiatry—Henderson and Gillespie.
Review of Seven Years of Malarial Therapy, W. D. Nicol, *Journal of Mental Science*, October, 1932.
General Paralysis: Result of Eight Years of Malarial Therapy, B Reid, *Journal of Mental Science*, October, 1932.
A Study in Pyreto Therapy, T. D. Power, *Journal of Mental Science*, October, 1932.

Station F. Box 4812.

CARCINOGENESIS—A LINE OF RESEARCH.

M. BENMOSCHE, M. D., New York, N. Y.

We first came to link the problem of carcinogenesis with the phenomenon of radioactivity about 1902. I was at that time associated with the late Dr. Ennion G. Williams. We speculated on certain physiological similarities existing between embryonal and malignant tissue, and also noted the closely related susceptibility of these two types of tissue to X-ray. In 1911 I attempted to interpret in terms of electrical parlance, terms to which we were limited in those days, the so-called electronic nature of malignant tissue, and pointed out the hypothesis that a malignant cell may be an outlawed reversion of a chronically irritated cell to its embryonic prototype, and that this reversion may be *via* a process involving the complex phenomenon of senescence. A chronically irritated cell is a cell unremittingly outraged, which eventually develops into an enraged unit. This enraged unit is probably the product of numerous generations of outraged cells. Then, dependent either on factors favorable to the development of disorganized cellular growth, or on an absence of factors responsible for the inhibition of disorganized growth, the enraged cells set up a new structure composed of their own elements with all their inherent and potential properties for independent and parasitical existence.

In 1908 and 1909 Prof. Lazarus-Barlow, at the Cancer Research Laboratories of the Middlesex Hospital, carried out a series of extensive researches to determine the presence and the relative degree of radioactivity in normal and malignant tissue by the electrolytic leak method. His work proved conclusively the presence of radioactivity in all animal tissues, with varying degrees of increased radioactivity in malignant tissue as compared with the normal.

During the years 1920 and 1925 I conducted independently a number of experiments which demonstrated the electric potential of various tissues. My set-up consisted of a series of rectangular glass jars, in size and capacity as nearly equal to each other as it was possible for me to get. Each jar had two opposite inner surfaces lined with pure sheet zinc. These zinc plates were connected directly to a sensitive galvanometer. Double distilled water was found to have an electrolytic action sufficiently near to zero to make it the medium in which the various tissues to be tested were mixed. All the factors involved were checked and kept as nearly equal as possible. The quantity of material tested consisted uniformly of distilled water 100 c.c. and tissue to be tested 10 grms. The whole was macerated in the electrolytic jar with a glass rod. A number of chemical substances of varying strengths in 100 c.c. of distilled water were tested in the same way.

One peculiar fact was invariably noted: certain chemicals in solution exhibited a variable polarity while certain other chemicals in solution showed a constant polarity. It was found that salts of the radioactive elements gave a galvanometric reading of a constant polarity. The same was true of solutions of all animal tissues that were tested. Such salts as sodium chloride and sodium citrate would register inconstantly from one polarity to another within

the course of a few minutes. The radioactive salts used were those of thorium, uranium and potassium.

The potassium which appears to be directly concerned with rapidly growing tumors is probably an isotopic element. It has been shown by Beebe and Clowes and spoken of by Kotzareff that there is an excess of potassium and a deficiency of calcium in rapidly growing tumors free from necrosis. Crile has demonstrated the increased electric conductivity of malignant tissue as compared with the normal tissue of the same organ in which the malignancy occurred.

In the experiments previously referred to, no extraneous electric current was employed. The reactions were created by using two plates of similar metal which were ionized by the tissue and other solutions acting as electrolytes.

The following chart summarizes the result of several hundred experiments. The galvanometer scale was marked off on either side of zero in sections A, B, C, D. Each section was ten inches in width, which was further subdivided in sections one-quarter inch in width. The excursions of the galvanometer were magnified by a series of reflecting mirrors.

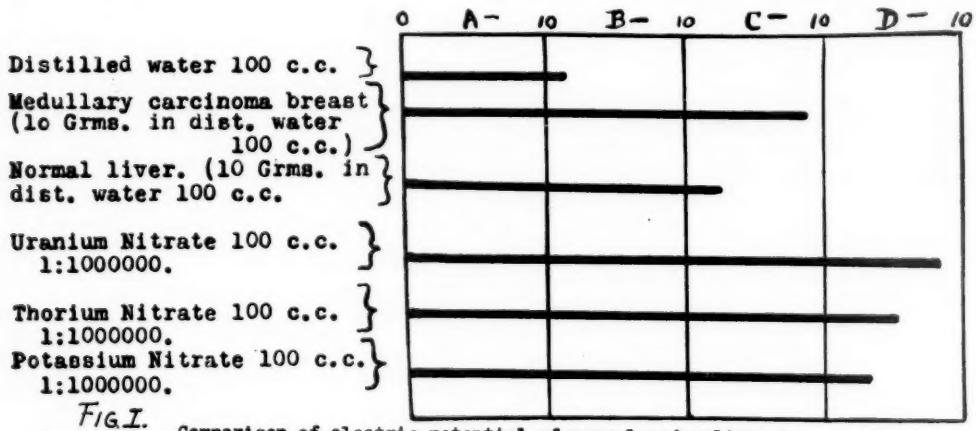
0
A— 10
B— 10
C— 10
D— 10
Distilled water 100 c.c.
Medullary carcinoma breast (10 Grms. in dist. water 100 c.c.)
Normal liver. (10 Grms. in dist. water 100 c.c.
Uranium Nitrate 100 c.c. 1:1000000.
Thorium Nitrate 100 c.c. 1:1000000.
Potassium Nitrate 100 c.c. 1:1000000.

FIG. I. Comparison of electric potential of normal and malignant tissue with known strength or radioactive substances.

Sampson Handley has repeatedly called attention to the association of lymph stasis with carcinogenesis. That carcinomas metastasize by lymphatic permeation is a significant fact. It has been definitely established that a papilloma or an adenoma is a frequent precursor of a malignant neoplasm, and that a chronic inflammatory condition is the soil from which spring the papillomas and adenomas. Wherever there is a chronic inflammation, resulting in papillomatous or adenomatous growth, we find dense lymphocytic infiltrations with a stasis of the lymphatic system of the part involved. The production of experimental cancer with coal-tar and coal-tar derivatives point to the same sequence of events. The same is true of all known carcinogenic agents such as:

1. Thermal. — "Kangri." The abdominal cancer of the Kashmiri Indians.
2. Mechanical.—Trauma.
3. Chemical.—Experimental cancer with coal-tar and coal-tar derivatives. The pulmonary lympho-sarcoma of the Schneerberg Cobalt Miners. The chimney sweep's cancer of the scrotum from soot.
4. Parasitic.—Fibiger's gastric cancer in rats caused by the feeding them with cockroaches infected with a nematode worm. Cancer of the bladder due to bilharziasis. Cancer of the tongue following syphilitic leucoplakia.
5. Radioactivity.—X-ray and radium.

The only definitely known radioactive agents which can be classified as true, etiological factors in carcinogenesis are X-ray and radium. It is quite probable, however, that all the agents, whatever they may be, are carcinogenic by virtue of their radioactive content, or possess properties which tend to increase the endogenous radioactive elements of the tissues involved. The effect of prolonged exposure of exogenous radioactivity on tissue is a form of chronic irritation which increases or intensifies the otherwise normally balanced endogenous radioactivity of the tissue cells, frequently to such an extent that they are able to

bombard their neighboring cells with a radioactive charge equal to or greater than the exogenous charge which primarily actuated them. Indeed, we may well wonder, in the light of our present knowledge, of the inseparable relationship of all life and all radiative phenomena, where one ends and the other begins, and if, after all, in the last analysis, one is not merely a stage, a degree, or an expression of the other.

The significance of the blocking of the lymph spaces of a chronic irritation which has led to a papillomatous or an adenomatous growth, lies in the stagnant accumulation of lymphocytes in closest contact with a given cellular structure. The large dense chromatin masses made up of the aggregated lymphocytic nuclei furnish the endogenous radioactive principle with which the immediate cellular neighborhood is continuously bombarded. It is as though there were normally present in the body in constant circulation a definite amount of radium contained in floating cellular units. A condition arises which causes a thrombosed mass of these units to lodge somewhere in the body. The result in that part would be equivalent to the effect produced by the application of a radium salt over a long period of time.

The role played by the lymphocytes in regenerative processes is probably that of a direct stimulation of the cells lining the margins of broken continuity by their endogenous radioactivity. Stagnation of the lymph system involved spells the difference between normal or balanced healing and excessive cellular hyperplasia with the tendency to malignant changes.

Matters for consideration:

1. What organ of internal secretion may be associated with stability of karyokinesis?

2. If there is such a secretion, may it be that it functions mainly through the lymphatic system?

3. On the assumption that there is such a secretion or hormone governing or balancing cellular activity, may it be that prolonged irritation produces a dysfunction of this hormone, and that this dysfunction manifests itself by a stasis of the lymph supply of the part affected?

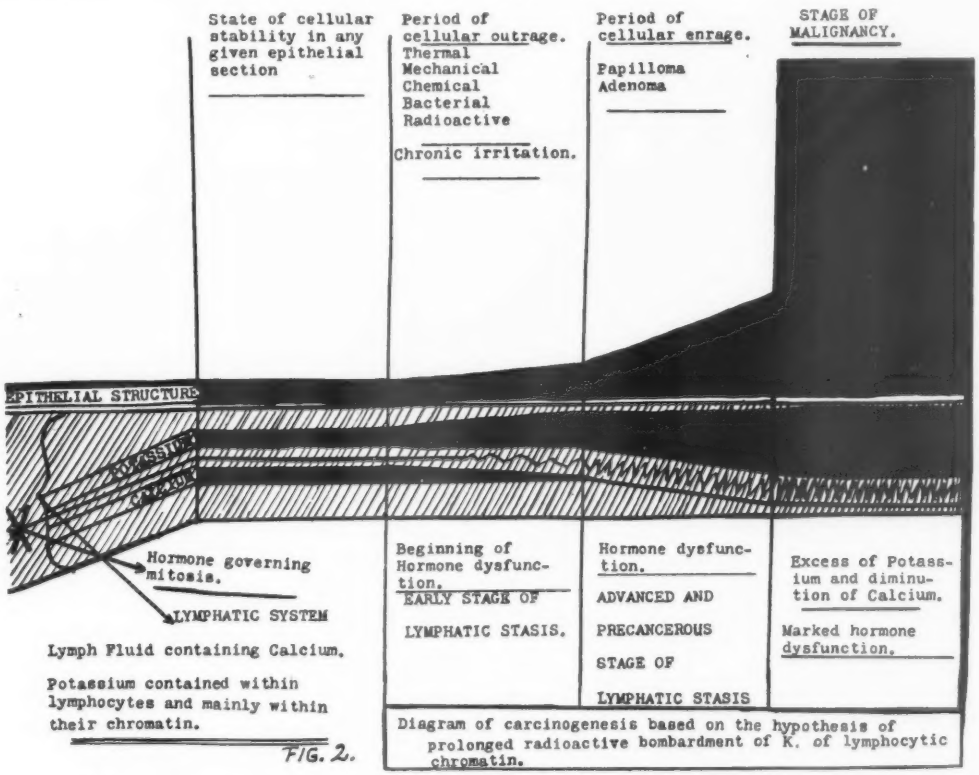

FIG. 2.

Diagram of carcinogenesis based on the hypothesis of prolonged radioactive bombardment of K. of lymphocytic chromatin.

a. Lymph chemistry.
b. Isolation of lymph chromatin.
c. Isolation of radioactive principle of lymph chromatin.
d. Experimental cancer with lymph chromatin.
e. Specific hormone lymphagogue.
f. The role of the isotope of Potassium in balanced and unbalanced karyokinesis.

Fully aware of the marked preponderance of qualitative over quantitative matter in this paper, nevertheless, sufficient justification for its publication rests mainly on an attempt to hypothesize a rational approach to the problem of carcinogenesis based on the accumulated facts of present-day knowledge, and to indicate a line of research.

600 West 111th Street.

DIVERTICULITIS.*

R. P. HAWKINS, JR., M. D., Clifton Forge, Va.
Associate in Surgery, Chesapeake and Ohio Hospital.

In attempting a discussion of diverticulitis, the historical aspect of the subject will not be entered upon, because this is more or less academic in character. Suffice it to say that diverticula are mentioned in our earliest studies on anatomy because of the frequency with which Meckel's diverticulum has been identified in the routine dissection of the human structure. So frequently is it found that it can with justice be removed from the realm of pathology and placed in the field of normal anatomy. This paper will deal exclusively with diverticulitis as pertains to the intestinal tract.

A diverticulum is a non-neoplastic outpouching of the wall of a hollow viscus, which does or did communicate with the lumen of the organ to which it is attached. Diverticula within themselves are purely inactive and inoffensive, but they are potentially treacherous when they become inflamed, or blocked mechanically, or when they enter into the production of an obstruction; then they become factors of deepest concern.

Diverticula are of two types—congenital and acquired. The congenital type assumes all the identifying characteristics of the organ to which it is attached. It usually has the three coats well defined—mucosa, muscular and serous. The muscular layer may be defective. The acquired diverticula are sacs of mucosa with a peritoneal covering. The muscle is customarily absent entirely. Diverticula are usually attached at or near the mesenteric border of the intestine; often they are wholly within the mesentery and may present the picture of an enlarged lymph node in their physical characteristics. Diverticula found in the small intestinal tract are congenital in the large percentage of cases. Favorite locations are duodenal and ileal. In our series there were two duodenal. Attached to the ileum two to three feet from the ileo-cecal valve we find the classical Meckel's diverticulum, which is the most frequently encountered of all, whether congenital or acquired. This structure varies in shape and size from a fibrous cord to a pouch two or three centimeters in diameter and four to six centimeters in length. It may swing blindly in the abdominal cavity, or it may be attached at its closed end by a band of fibrous tissue to the abdominal wall at or near the umbilicus. It is a remnant of the vitelline duct of embryonic life. This type is customarily attached on the anti-mesenteric border of the intestine. The diverticula of the large intestine are acquired. They are the results of long-standing pressure within the gut being exerted against the wall, causing it to give way at its weakest points. These weak areas are blood vessel apertures and appendices' epiploicae or fatty tags.

Diverticula are symptomless until they become inflamed, or until they become blocked by fecal accumulations, or until they become pockets that predispose to stasis, or until they become factors in the production of a mechanical obstruction, as may occur with a Meckel's variety. Acute diverticulitis may simulate any form of acute abdominal pathology. They ulcerate, become gangrenous, may perforate, or form abscesses, all of which may forerun an obstruction or peritonitis. Diverticulitis of the duodenum may suggest peptic ulcer, cholecystitis, or duodenal dilatation. Diverticulitis of the ileum is always diagnosed appendicitis prior to operation. Symptoms exactly correspond, except that in a diverticulitis the area of tenderness may shift itself, and, if a mass be present, it may be movable and near midline; nevertheless the right iliac fossa is the preferred site. Colic, nausea, vomiting, constipation, temperature, leucocytosis, tenderness, rigidity, a mass, later distention, and an old familiar picture is complete.

Diverticulitis of the colon presents a dif-

*Read before the Medical Association of the Valley of Virginia, at Clifton Forge, Va., May, 1933.

ferent situation. This is a disease of middle or late life. It is at first chronic, later acute. The cecum and sigmoid are the common locations of the acquired diverticulitis. Patients with this condition are often asthenic, debilitated, profoundly constipated, and perpetually complain of some indefinite abdominal discomfort which we are more than likely to consider very trivial. The rigors and pressures of constipation form these sacs and then fill them with faecal debris, and a stasis is imminent and indeed unavoidable. Irritation is inevitable and a resulting inflammation is certain. Acute diverticulitis is the picture again, but presenting fundamentally different characteristics as compared to acute diverticulitis of the small gut. Formerly constipated, these patients now have periods of diarrhea with blood and pus in the stools. There is low abdominal pain, temperature, a tender mass, moderate leucocytosis and general inaptitude. If the infection is in the sigmoid, it simulates a left-sided appendicitis. The pathology varies in its intensity, may resolve without a diagnosis, but is always prone to recur at increasingly frequent intervals. A low, left-sided tenderness in an adult invariably means a diverticulitis of the sigmoid.

In our gastro-intestinal X-ray studies with patients who have indefinite but aggravating abdominal symptoms it behooves us to keep diverticula in mind. These sacs will fill with barium, but their emptying time is usually greater than that of the regular intestinal tract.

The treatment of diverticulitis of duodenum is usually selective, but surgical removal is most often indicated and necessary. The treatment of acute diverticulitis is the treatment for any acute abdominal disorder. Diverticulitis of the ileum is as much an emergency as is appendicitis. If the neck of the sac be small it may be ligated and the stump inverted. If there is a large neck, a resection is often necessary. Treatment of diverticulitis of the colon should be conservative and palliative in the beginning. Bland diets, mineral oil, hot fomentations and cleansing enemas often allay the acuteness of the disease. A large percentage of these patients present themselves for treatment after there is a well defined abscess. This must be drained and, if symptoms persist, a resection of a portion of the large intestine is necessary by the two-stage operation of Mikulicz.

From 1928 to 1932, inclusive, we have had, at the Chesapeake and Ohio Hospital, one case of acute diverticulitis for every twenty-five cases of acute appendicitis. This ratio, it seems, is a rather startling comparison, and it places diverticulitis in the classification with the more common and ordinary diseases.

THE USE OF KIRSCHNER WIRE TRACTION.*

THOMAS WHEELDON, A. M., M. D., F. A. C. S.,
Richmond, Va.

Kirschner wire traction is traction obtained by the introduction of a fine wire through bone and the production of tension upon this wire to prevent its bending and thereby cutting tissues when traction is put upon it. It is readily understood how difficult it is to drive a fine wire through solid bone and how unsatisfactory it would be if the wire were allowed to bend along the side of the extremity after it had been introduced. It is fortunate that the development of special technique has made it possible to drive such a wire and to prevent its bending.

We are all familiar with the faults of each of the usual methods of traction. It is difficult to get *adhesive* applied properly; there are certain places where it is impossible to use adhesive; for example, in fractures of the distal part of the humerus or tibia; adhesive frequently produces irritation of the skin and if removal is not actually demanded, sometimes, at least, causes serious skin sloughs; and, finally, adhesive often gives way at a crucial point at a time when continued traction means everything. In such events the work of weeks may be lost, and at times excellent results may never be re-obtained. *Heussner's glue*, while having some advantage over adhesive, has many of its defects, and, in addition, has the disadvantage that it is difficult to teach persons to apply it properly. *Steinmann pins* obviate the above faults, but, due to their size, seem to the writer to be more likely to produce some tissue necrosis and to bring about a certain psychological effect on the patient. (The writer, however, uses Steinmann pins at times in straight fracture work.) *Kirschner wire*

*Read before South Piedmont Medical Society, April 18, 1933.

This investigation was aided by a grant from the Wednesday Club, of Danville, Va., in the conduct of its Crippled Children's Clinic.

XUM

traction has none of the drawbacks above mentioned, is easy in its application, is certain and efficient, can be used almost indefinitely, and does not upset the patient mentally. (As a matter of fact, patients frequently never realize that the fine wire actually goes all the way through the bone).

Apparatus

The apparatus necessary for the application of this method of traction consists of—

1. A supply of small Kirschner wires.
2. An accordion applicator or introducer.
3. Bows of proper size.
4. Special wrench.

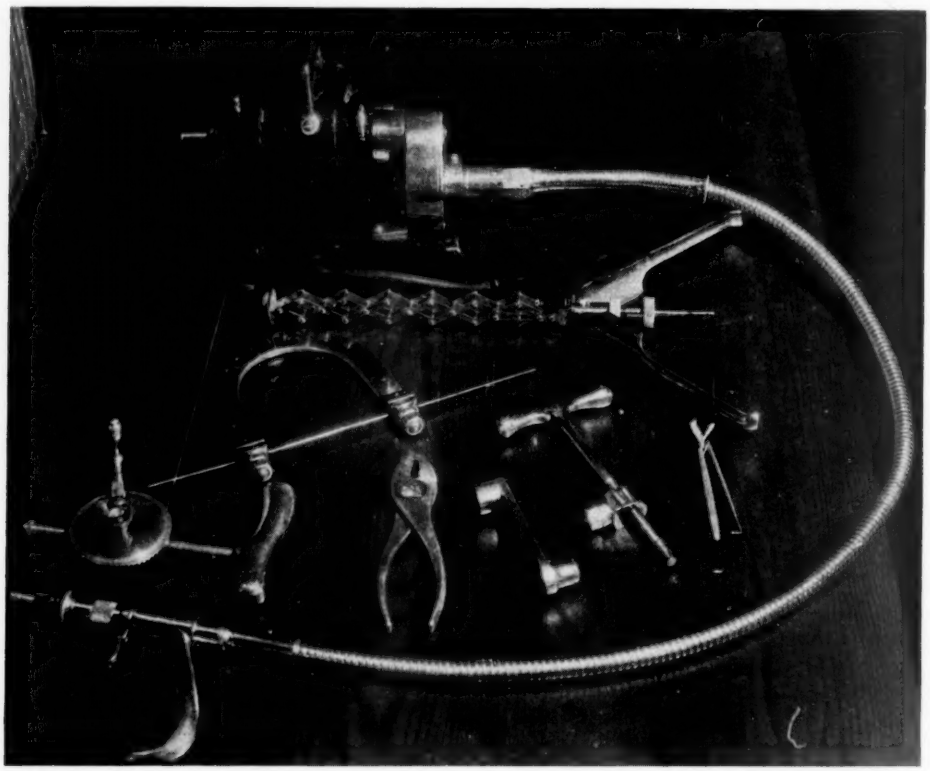

Fig. 1

5. Tension adjuster.
6. Pair of small pliers.
7. Motor or hand drill with special arrangement to fit accordion applicator. The writer recommends the motor drill, as the rapid revolution of the wire makes its introduction very rapid and practically painless.

The apparatus is illustrated in Figure 1.

Technique

The writer feels that the utmost care must be taken with asepsis in these cases. While the method is simple in execution, the patients are prepared in the operating room or in bed as for major bone surgery. After the preparation of the part, a few drops of 2 per cent novocain are injected at the site of the entrance and exit of the wire. No other anesthetic is required, unless nervousness of the patient or painful manipulations or other procedures to be carried out at the same time make it necessary. For the former, the writer is accustomed to sodium amytal; for the latter the procedure would determine the type of anesthetic. The introduction of the wire is but a momentary act. The site is selected, the tip of the wire is pressed against this point with the accordion fully extended, pressure is made and the wire driven through the bone. A compound tincture of benzoin dressing is applied. The proper size of bow is selected and one end fastened to the wire. With the other end

loose, the wire is tightened with the tension adjuster. The other end of the bow is now made fast and the tension adjuster removed. Weight is finally applied to the bow in the manner selected by the surgeon.

Sites of Introduction

The writer has used the following sites of introduction in a representative series of cases:

1. Os calcis.
2. Lower end of tibia and fibula.
3. Condyles of femur.
4. Patella.
5. Phalanges of fingers.
6. Lower end of radius and ulna.
7. Olecranon.

Certain of these, i. e., lower end of radius and ulna and olecranon, can be used in combination with each other to advantage.

Conditions in Which Kirschner Wire Traction May be Used

Each of the sites above mentioned can be used in several conditions. Only a few representative ones will be mentioned. These are listed below:

Adjuvants

After the Kirschner wire is introduced and the bow attached, traction is obtained in the physiological direction by the old Buck's extension apparatus, Hoke or Roger Anderson well-leg traction in plaster, or by means of the Balkan frame. The writer uses the Buck apparatus in deformities of the knee and hip from acute disease; he uses the Hoke in fractures of the tibia, fibula, femur, humerus, ulna and radius, and in deformities of knee and hip from chronic disease; he uses the Roger Anderson well-leg traction in fractures of the tibia, fibula and femur, and he uses the Balkan frame in more complicated fractures of the femur and pelvis, in fractures involving ulna, radius and humerus at the same time, and in the early treatment of loss of substance of the radius and ulna.

Figures 2, 3 and 4 are self-explanatory, and show the sites of introduction of the wire and

Fig. 2

Site	Conditions
1. Os calcis	a. Fracture of os calcis. b. Fracture of tibia or tibia and fibula. c. Fracture of femur. d. Fracture of pelvis. e. Deformities of knee from acute or chronic disease, i. e., tuberculosis or burns. f. Deformities of hip from acute or chronic disease, i. e., tuberculosis or burns.
2. Lower end of tibia and fibula.	Same as os calcis, with exception of fracture of os calcis.
3. Condyles of femur.	a. Fracture of femur. b. Fracture of pelvis. c. Deformities of hip from acute or chronic disease.
4. Patella.	a. Extension deformity of knee where knee cannot be flexed because of contraction of anterior thigh group.
5. Phalanges of fingers.	a. Fracture of fingers. b. Deformities of fingers from acute or chronic disease.
6. Lower end of radius and ulna.	a. Fracture of radius and ulna. b. Loss of substance of radius and ulna from trauma or disease.
7. Olecranon.	a. Fracture of humerus.

XUM

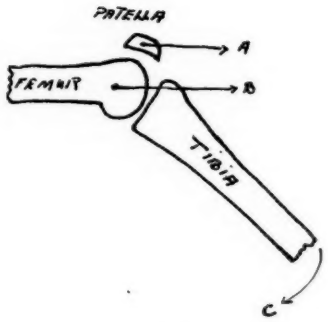

Fig. 3

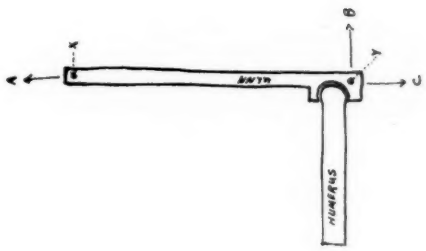

Fig. 4

the direction of the traction in conditions involving the lower and upper extremity. Figure 4 shows how combinations may be used to obtain both traction and countertraction in such conditions as loss of substance of ulna and radius and in multiple fractures.

Figures 5 and 6 show the excellence of the method in fractures of the femur and humerus,

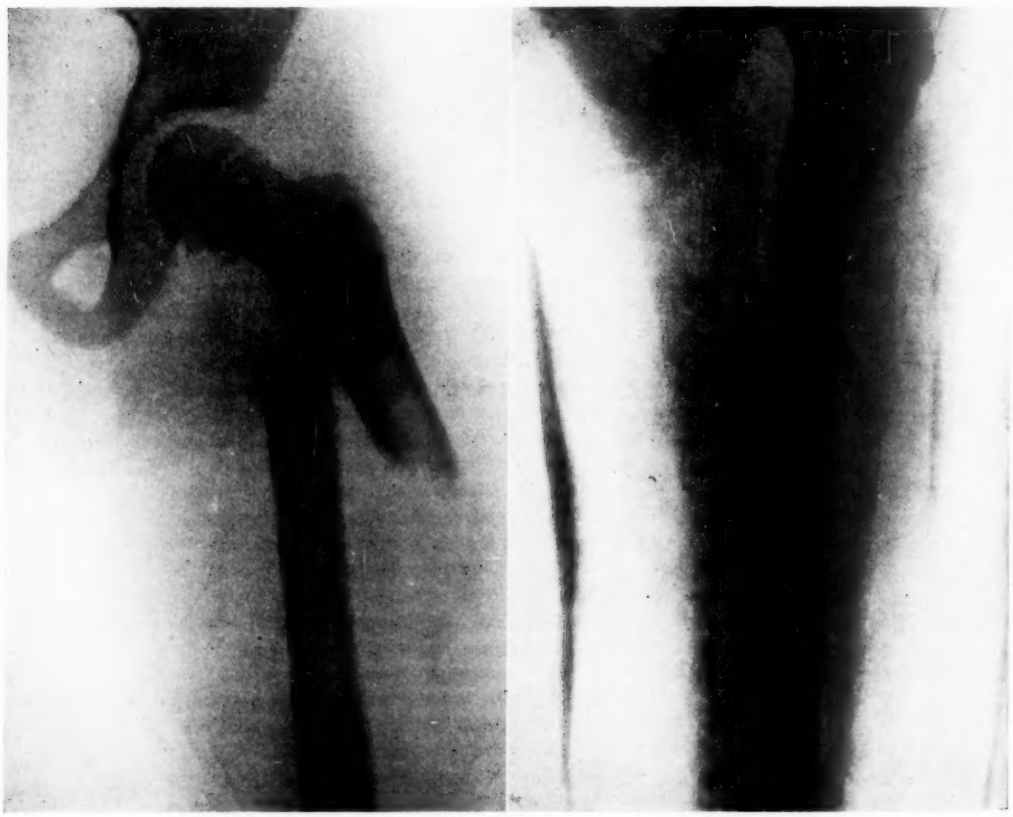

Fig. 5

Fig. 6

respectively. The femur was treated in this case in a Balkan frame, with the hip flexed

Fig. 7.

to 90°. The humerus was treated with Hoke traction in abduction plaster. The patient was ambulatory in twenty-four hours—as soon as the plaster dried.

Figure 7 shows a case of fracture of the humerus treated with Kirschner wire, Hoke traction and abduction plaster. It is obvious how mobile the joint is.

Conclusion

The writer has a sufficiently large series of cases in which he has used Kirschner wire traction, in the conditions above described, to make him feel that it retains all of the advantages of other methods, has none of this disadvantages, and adds many valuable features not found in others.

THE DIAGNOSIS OF ACUTE APPENDICITIS.*

W. H. REED, M. D., Kingsport, Tenn.

On first thought, it may seem to you, a waste of energy to discuss a subject so commonplace

*Read before the Sullivan-Johnson County Medical Society, March, 1933.

as acute appendicitis. However, the writer feels that there are few diseases, if any, that transcend appendicitis in importance when considered from the standpoint of the general practitioner. This seemingly bold statement is made for the following reasons: In the first place, it is a very common disease in the everyday practice of us all. This would not make the disease so wrought with importance were it not for the alarming mortality the disease carries with it. With all the information and knowledge that the medical profession has in its possession as to the etiology and treatment of appendicitis, the mortality has not been reduced. In recent years we have heard a great deal said and written about cancer and its alarming mortality. Prevention by early recognition of the initial signs and symptoms seems to be the only promise in lowering the mortality in cancer. However, the country, and especially the medical profession, is much exercised because of the mystery in etiology and the ineffectiveness of treatment. On the other hand, appendicitis is not cloaked in mystery, either in its etiology, symptoms or treatment. Still, like Tennyson's Brook, the mortality goes on and on. Since appendicitis is open and above board in its attacks, and we have an effective remedy for the repulsing of these attacks, why, then, the mortality and morbidity that follow these attacks? Is this mortality the fault of the medical profession, the relatives, of the victims, or both? I leave the question with you.

Etiology.—The most important cause of acute appendicitis is bacterial invasion, usually by the colon bacillus. Other bacteria may be the cause during the course of acute infectious conditions and from foci in distant parts of the body. Other causes are kinks in the appendix, foreign bodies, fecal concretions and intestinal parasites. Quite frequently the appendix becomes infected, due to its close proximity to some other infected organ, as in acute salpingitis.

Diagnosis.—Acute appendicitis in children is more difficult to diagnose than in adults, due to the fact that many conditions outside the abdomen give abdominal symptoms. The constitutional symptoms are more pronounced in children, and, further, the appendix is often misplaced. The usual signs and symptoms occur in the following order: pain in the abdomen, nausea and vomiting, tenderness and rigidity, fever and increased pulse rate, and leukocytosis.

In making a diagnosis of acute appendicitis, pain is the most important symptom, and should be studied with great care and discrimination. The pain usually starts in the epigastrium. It may start in the umbilical region, and when it does it is colicky in nature. If the pain starts in the right abdomen or in the right lower quadrant, it is not appendicitis. I am speaking of an attack of acute appendicitis. When the pain starts in the epigastric region, it soon spreads to the umbilical region and usually becomes diffuse over the entire abdomen. Nausea and vomiting soon follow the pain, certainly within a few hours. Any attack of acute abdominal pain that is not soon followed by at least nausea is not appendicitis. One symptom that has often been of help to me is the time that nausea and vomiting occurred. If it occurs before the onset of pain, appendicitis can be ruled out.

In 1889, McBurney, a famous New York surgeon, described the now familiar "McBurney point." This is the point of maximum tenderness in acute appendicitis, and is located in the middle third of a line drawn from the anterior superior process of the ilium to the umbilicus. It is preferable to make pressure at McBurney's point with one finger. Of course, this sign is not so reliable in children for reasons already mentioned. This sign has been a great help in making a differential diagnosis, and no sign has ever been found to supplant it in importance.

Rigidity is another sign that is usually present in acute appendicitis, and is found in the right lower quadrant. The absence of rigidity does not rule out appendicitis, and its location will depend on the location of the appendix. In post-cecal appendicitis, and when a colon filled with gas intervenes between the palpating hand and the appendix, there may not be a great deal of rigidity. It has been the writer's experience that fever is a variable symptom, and when the fever is very high, the diagnosis is always in doubt. This is not true in children, as the temperature runs much higher in children than in adults. When the signs and symptoms point strongly to appendicitis in an adult, and the temperature is running above 102, pyelitis, acute salpingitis and basal pneumonia must be eliminated.

Another sign that has been helpful to me

is to have the patient cough and then place his hand at the exact point where he has experienced pain. If there is no pain on coughing, there is a strong doubt as to whether the appendix is the offender.

Leukocytosis is another important sign in acute appendicitis. It is always present if the condition is acute. It is exceedingly important in making a differential diagnosis. A differential count is probably more important than a mere leukocytosis. An increase in the polymorphonuclears is invariably present. Ambrose McGee has recently done some very important work with Schilling's differential count.

Inspection of the abdomen is an important sign. By close observation, it will be noted that the breathing will be more costal than normal, and a bulging or lump will be seen in the right side.

Palpation brings out probably the most important sign or symptom in diagnosing appendicitis. With a warm hand, palpation should begin on the left side of the abdomen, palpating toward the stomach and finishing over the right lower quadrant. The presence or absence of rigidity should be noted, and absence or presence of masses. The facial expression should be carefully watched during palpation, as the fear of an operation will often cause a patient to try to conceal pain during the process of examination. Palpation should be repeated a number of times in order to confirm the point of rigidity, and the location of the pain as to its constancy. Percussion may help some in the location of dull areas. The X-ray, with opaque enemas and meals, is of little value in acute appendicitis. I also feel that rectal examinations are of little value, except in advanced peritonitis, where there may be localized abscesses.

There are a great many signs or tests that may be utilized in making a diagnosis of acute appendicitis. Aaron's sign is a feeling of distress in the epigastric region when firm pressure is made over the area of the appendix. The pain or distress may be more pronounced in the left hypochondrium. Blumberg's sign is a feeling of sharp pain when the hand is removed. This sign is more significant when the infection has passed beyond the appendix and peritonitis is beginning. Brittain's sign is retraction of the right testicle when firm pressure is made over the right lower quadrant, or rather over McBurney's point. This sign is considered by some authorities as being pathognomonic in gangrenous appendicitis. The testicle resumes its normal position when pressure is removed. Meltzer's sign is the production of pain by pressure over the appendix while the patient is lying prone, with arm over head, left leg flexed, and the right leg extended, and attempting to raise the right leg while it is extended. This maneuver impinges the appendix between the psoas muscle and the anterior abdominal wall.

Differential Diagnosis. — There are many conditions that may be confused with acute appendicitis. I will not go into a detailed discussion of them, but will only mention some of the more common conditions that are frequently mistaken for appendicitis: Pleurisy and pneumonia in the right lung; renal calculi; pyelitis, and right urethral obstruction; fecal impactions; mesenteric adenitis; mesenteric thrombosis; intestinal obstruction; acute cholecystitis; gastric and duodenal perforations; typhoid fever; acute salpingitis; strangulated ovarian cyst; and rupture of the graafian follicle with hemorrhage. Any surgeon who sees many cases of acute appendicitis will be taxed severely in differentiating between right-sided pneumonia and appendicitis. Pneumonia will give intestinal symptoms, especially in children, that simulate appendicitis very much. You will have pain, vomiting and rigidity, but, on the other hand, the fever in pneumonia is always higher. The leukocyte count will not be of any service, as both conditions give an increased count. The respirations are more rapid in pneumonia. The X-ray, when available, is a great help. However, it would be selecting the course of less evil to open a pneumonia case, than to wait too long and lose the case from a ruptured appendix. Pyelitis can be very easily ruled out from the high temperature and urinary findings. Intussusception and other forms of obstruction cannot always be ruled out, but in these types of cases it makes little difference from the patient's standpoint, as they are also emergencies and require immediate surgical intervention.

To discuss the treatment of acute appendicitis would make this paper too long, and I will confine myself to the treatment of the neglected cases that are seen from a few days to a week after the beginning of the attack.

XUM

The treatment of acute appendicitis is fairly well standardized. We are all in accord that operation is the only treatment, and the earlier the operation, the better the chances are for recovery. I am going to recite briefly two cases for your consideration.

Case 1.—White female, age 18, was taken acutely ill three days before seen by me, with severe pain in the stomach region, nausea and vomiting. After about eighteen hours, pain, which had gotten over the entire abdomen, had stopped, and the family felt that she was getting better and all would be well. However, on the day previous to my seeing her, she had begun to suffer severely over the entire abdomen, and the vomiting recurred. She had been seen on this day by her family physician.

Physical Findings: Face flushed, with a pinched expression. Tongue was heavily coated and the lips parched. The eyes were sunken and there was evidence of dehydration. The past history was negative. The lungs were negative, and the heart action was good. The temperature was 102.5; leukocyte count 14,500; urinalysis negative; abdomen distended and very rigid; there was no palpable masses. A diagnosis of ruptured appendix with general peritonitis was made. Operation was done immediately. There was a foul odor from the abdominal cavity and very muddy fluid was present. The intestines were adherent and covered with a whitish film in places and deeply congested throughout. Free drainage was left in the abdominal cavity. The patient died at the end of the first week.

Case 2.—White female, age 13, had had a severe cold, though she continued to go to school, but on November 25th was given two pills. Soon after taking the pills she began having severe pain over the abdomen and became nauseated, but did not vomit. Became very tender and sore over the entire abdomen; purgatives were continued and bowels moved frequently. On November 30th, patient began having almost a continuous desire to stool. Movements consisted of phlegm and some blood. I saw patient on December 3rd. The abdomen was distended and rigid throughout. There was a well-defined mass just inside the left iliac crest. Rectal examination showed lower bowel empty, and the mass could be outlined and filled the pelvis, extending up on the left side around the sigmoid. Barium meal enema showed the colon filled its entire length, beyond the sigmoid. W. B. C. 14,200.

Diagnosis: Abscess of mesenteric gland, with possible localized peritonitis following ruptured appendix.

This case was operated on, a median incision being made. There was an enormous abscess in pelvis that extended high upon the left side. A post-operative diagnosis was made of ruptured appendix, and peritonitis with localized abscess. Recovery was rapid without any complications.

These two cases are reported to demonstrate one point, which I think is very important. It brings up the old question, "when to operate." There are a certain number of virulent infections that are very rapid in their progress, with a rapidly spreading septic peritonitis associated with symptoms of prostration, that will terminate fatally with or without operation. On the other hand, I am convinced that a few of these cases that are seen three or four days after the onset of the attack will recover, or at least will localize so that they can be safely operated on, if treated medically with opiates, forced fluids, ice to abdomen, elevation of bed, gastric lavage and the withholding of all fluids except a limited amount of water by mouth. The first case reported would have had a better chance if treated by this method, while the second case shows very clearly to my mind what nature will do even under the most unfavorable conditions.

CONGENITAL ATRESIA OF THE RIGHT POSTERIOR NARIS.*

R. CLARK GROVE, M. D., New York, N. Y.

Cases of congenital atresia of the nares are still infrequent enough to warrant reporting, especially when they have been cured by simple operative procedures. It is for these reasons that our case is presented. During the past two and one-half years the otolaryngological division of the Allergy Clinic of Roosevelt Hospital, which averages about 600 new cases per year, has seen only one such condition.

Stewart,[1] two years ago, presented two cases (in sisters) of bilateral congenital atresia encountered in his practice at the Deaconess Hospital, Edinburgh, and six cases of unilateral atresia which occurred in the service of the Ear, Nose and Throat Department at the Royal Infirmary of Edinburgh. He notes that over a period of twenty years (1907-1926 inclusive)

*From the Otolaryngological Division of the Department of Allergy, Roosevelt Rospitul, New York City.

in 27,863 cases of nasal and sinus diseases there were six cases (0.02 per cent) of unilateral atresia of the choanae and not a single case of bilateral atresia. Stinson[2] has reported recently a case of bilateral congenital posterior choanal atresia and Geiger and Roth[3] one of the left posterior choana.

Congenital atresias may be complete or show a minute perforation sufficient to admit a small probe. They are more often unilateral than bilateral. Pathologically, they are membranous, osseous or membrano-osseous. Apparently heredity and sex play no part in the etiology. According to Stewart,[1] the theories of causation are (1) persistence of the buccopharyngeal membrane, (2) overgrowth medialward of the vertical and horizontal palatal processes. (3) persistence of naso-buccal membrane, (4) results due to an inflammatory condition of the nasal passages in utero, a theory which he discards in his cases.

Report of Case

A. R., white girl, aged twenty years, telephone operator, was admitted to our Allergy Clinic, then at the New York Hospital, on February 28, 1930, complaining of sneezing and watering of the nose. Her family history, including parents and several brothers and sisters, was entirely negative for any nasal symptoms. Her own past history was unimportant except for a tonsillectomy and adenoidectomy two years before. She had enjoyed good health until five or six years ago, when she began to have attacks of sneezing and watering of the nose, itching of the eyes and lacrimation. The onset was gradual. She had not changed her environment at the time. The attacks would appear suddenly and last several hours. They were nonseasonal and were not related to contact with any airborne substance nor to ingested foods or drugs so far as she had observed. She had no seasonal hay fever nor asthma No headaches nor nasal obstruction were noticed by her and the hearing was not affected. The senses of smell and taste were normal. In 1928 she was examined at one of the large nose and throat clinics because of her trouble and was told to have her tonsils removed, which she did, but with no improvement. Nothing was said about her nasal condition. About a month before admission to our clinic, she went to another nose and throat clinic where she was examined by anterior rhinoscopy and sent to us for allergic tests. No mention was made of any other nasal findings.

Examination. — The patient was slightly underweight and slightly anemic. The face was symmetrical. There was a moderate deflection of the septum to the right posteriorly. The nasal membranes were swollen, pale and watery. There was considerable mucus on the floor of the right nostril. The frontal sinuses and antra transilluminated clearly. When an attempt was made to pass an applicator, tipped with cotton and cocaine, to anesthetise for examination posteriorly, a firm obstruction was met on the right side about three-quarters the length of the nostril as measured through the left one. A Wappler nasopharyngoscope was then passed and the obstruction could be felt to be bony. It sloped upward, backward and outward. The inferior turbinate and apparently the tip of the middle turbinate were continuous with it. No perforation could be seen, probed or located with a dye. The anterior tip of the middle turbinate was slightly polypoid, the inferior turbinate hypertrophied and the meatus in the anterior ethmoid region was becoming polypoid. No pus was coming from any of the sinuses. On passing the nasopharyngoscope through the left nostril this side was found to be normal. The adenoids were small. Turning the instrument so that a view of the opposite side could be obtained, no sign of the obstruction could be seen. The Eustachian orifices were normal. However, on posterior rhinoscopy with the mirror, the whole right posterior choana was occluded by a smooth sloping atresia which was about a quarter of a centimeter from the posterior edge of the septum. No posterior turbinal tips could be seen. X-rays showed the right antrum to be slightly hazy, but all the other sinuses were clear. Irrigation of the right antrum was negative for any discharge. The teeth were in good condition. The tonsillar beds still showed some lingual tissue. The ear drums were normal, as was the hearing to the routine tests.

The general physical examination, including the blood Wassermann, was negative.

Intradermal skin tests showed a moderate reaction to stock dust and a marked reaction to her own dust extract. It was observed during the treatment that a 10 per cent argyrol solution in the nose caused vasomotor symptoms. However, we were not able to demon-

XUM

strate* any skin-sensitivity by the "patch" method.

The clinical diagnosis was congenital atresia of the right posterior naris and vasomotor rhinitis with a sensitivity to dust and argyrol.

Operation.—On July 1, 1931, using butyn-cocaine-epinephrine anesthesia, the obstruction was punctured with a chisel and the edges bitten away with the sphenoid rongeur until an opening about 1.0 cm. x 1.5 cm. was made. The bone was quite hard and covered on both sides by smooth membrane. There was very little bleeding. The septum was not removed posteriorly, but the bony atresia was cut down as closely to the septum as possible. A No. 20 rubber catheter was left *in situ*. The polypoid membrane on the right middle turbinate and the hypertrophied membrane on the right inferior turbinate were removed at the same time. A vaseline gauze packing was placed in the right nostril.

Course.—The packing was removed the next day, but the rubber tube was not changed until the fifth day, after which it was changed at three or four day intervals until the end of two weeks, when it was removed. In the meantime the nose was kept cleaned with suction and nasal irrigations, and the patient used albolene drops. After the tube was removed the granulations were touched occasionally with 10 per cent silver nitrate, any adhesions separated, crusts removed with suction, and the operative site dilated gently with large cotton-tipped applicators. The patient made an uneventful recovery and was completely healed in six weeks. Since that time she has been seen at monthly intervals and occasionally the area is dilated with the nasal dressing forceps. She has had only one upper respiratory infection which subsided quickly. The opening after two years is still about the size of a lead pencil and the patient breathes quite freely through this nostril.

Discussion

This case report involves a young white girl with a congenital unilateral atresia of the right nostril. According to the literature this side is most frequently affected. The patient had never detected the obstruction, and came to the clinic because of vasomotor symptoms. She was seen in two nose and throat hospitals and the atresia was not discovered, the tonsils being removed in one clinic. This is certainly a warning to all of us as otolaryngologists to see that every patient gets a complete and careful examination. The vasomotor symptoms were due to dust sensitivity. What is even more interesting is that the patient showed a definite idiosyncrasy to argyrol, and we believe that this is more frequent than most rhinologists believe. Such patients are made much worse by the Dowling treatment.

The atresia was osseous, being thick and dense throughout, so that we are inclined to think that its origin lay in an overgrowth mediaward of the vertical and horizontal palatal processes as described by Stewart.[1] The operation consisted in simply rongeuring away enough bone to give good breathing space. No submucous resection was necessary. A No. 20 rubber catheter was left *in situ* for about two weeks and the nasal cavity cleaned with suction and nasal irrigation. No post-operative cicatricial atresia developed. Result is excellent after two years.

Stewart's[1] operative procedure consisted in doing a submucous resection, then elevating the membrane from the atresia and rongeuring away the bone. The disadvantage of this method, unless one is skilled, is that the posterior end of the septum may be rongeured away and the atresia left untouched. Stinson[2] simply reamed out the obstruction, using a Freer submucous resection elevator and keeping one finger in the nasopharynx to be used as a guide. Both men report good results in their cases and we agree that congenital atresia of the nostrils is a condition which is quite amenable to operation.

Bibliography

1. Stewart, J. P.: Congenital Atresia of the Posterior Nares. *Arch. of Otol.*, 1931, 13, 570.
2. Stinson, W. D.: Osseous Atresia of the Posterior Choanae. *Arch. of Otol.*, 1932, 15, 101.
3. Geiger, C. W., and Roth, J. A.: Osseous Choanal Obstruction and Adenoid Tissue. *Arch of Otol.*, 1932, 15, 441.

Sixty East Fifty-Eighth Street.

*By courtesy of Dr. James H. Barnard.

Correspondence

The Syphilis Problem.

To the Editor:

In a recent article appearing in the Virginia Medical Monthly (December, 1933, pp. Nos. 524-31), Dr. Taliaferro Clark, Assistant Surgeon General United States Public Health Service in charge of the Department of Venereal Diseases, brings his article on "The

Syphilis Problem" to a close with the following: "In conclusion, may I not quote the statement of one of the leading syphilographers of the country who says that '*The responsibility for the modern control of the infectiousness of syphilis, and therefore its spread, is not in the hands of the church with its preaching, the law with its mandates, or the laboratory with its drugs, but it is to be met or ignored by the every day doctor.*'"

Thus Dr. Clark passes the buck for the suppression and prevention of syphilis squarely up to the individual members of the medical profession. According to his statement, no other agency is concerned with the issue. That much is perfectly clear. Since the disease seems to be on the increase in our country, this is certainly a stinging, disconcerting, humiliating bit of news to us every day doctors.

The medical profession is then, according to Dr. Clark, in a position in which, in order to maintain its high standing, it must do one of two things, or a combination of both: it must either change most radically its method of dealing with this disease, or it must satisfactorily refute the allegation.

Should the *entire* responsibility of this issue, or the *only* blame for the American failure to control and reduce the amount of syphilis among us, be placed *solely* upon the shoulders of the every day doctor? I do not think so, and I take this method of dissenting from Dr. Clark's belief. I feel that the charge is unfair, and that a cold, analytical review of the facts in the case will not substantiate it. In truth, I feel as deeply as I have ever felt anything in connection with my professional work that the eventual good of our common country will be hurt no little if this statement is allowed to go unchallenged, or this belief permitted to prevail. I say this because, as it now conducts itself, no inroads are being made upon the average prevalence of syphilis by the nation; the reverse is true; the average increases, and, unless we alter the order of progression, an appreciable degree of national degeneration will be the inevitable consequence.

In a treatment survey several years ago of the cases of syphilis in the indigent which was made from the records of the hospital that treated all of this type of patients for the city of Norfolk, it was found that the average amount of treatment submitted to by the whole was 1.3 doses of neo-salvarsan and 1.2 doses of mercury or bismuth per patient: some individuals took more; others none. What actually happened was that these thousands of patients took only that woefully inadequate amount of treatment that it pleased them to take. The medical attendants were powerless to influence them.

In speaking of this willy-nilly state of affairs, the City Health Commissioner stated: "The question of what this department, with its limited means, can do in dealing with syphilis has been my real stumbling block since I have attempted to serve the City in a public capacity. I have discussed the subject with the hospital authorities, with the City Attorney, and with the police officials, and I must confess that I have made no progress."

Wherein rests the culpability of the every day doctor in such instances as this? In the interest of the health of his community the every day doctor has assisted effectively in creating the office of Health Commissioner to represent him and his city or county, and to carry on for both far more successfully than he, individually or collectively, can carry on. And yet, this Health Commissioner, after consulting with the duly vested authorities, and after seeking cooperation from all possible sources, as well as using to the fullest the resources of his own department, admits openly that the situation is utterly beyond him.

How can the every day doctor be responsible for the prevalence of syphilis when he cannot treat those who have it unless they seek him out for this purpose, and, having sought him, willingly take the amount of medication needed to render them non-infectious or to cure them? The decision is not his to make. He has nothing to do with it. It is the patient's right to decide what shall be done in the matter, and all too often syphilitics even of and above the average in intelligence will not carry out fully his instructions as to treatment. There is no form of persuasion or therapeutic hypnotism within his power that the every day doctor may use routinely to change the reaction of the mass of syphilitics in this respect. He succeeds in inducing many syphilitics to follow his advice to the letter, but he *cannot reach or touch* that irreconcilable, irresponsible remainder which is the greatest disseminator of the disease.

It is more than likely that there are every day doctors who do not diagnose their cases as early as might be, or who do not administer either enough or proper treatment. Let

XUM

us grant that there are more of these delinquent physicians upon the professional roster than we would like to see. But these negligent ones are not responsible for the whole of our great army of syphilitics. For the most part, we must thank the luetic moron for this vast array of infected ones; there lie the horror and the tragedy of the thing, for these are they whom neither the health official nor the every day doctor may reach under our present system of management of the disease. These are they who decide the issue.

Dr. Clark has set himself on record as confirming this statement when he said in a bulletin from his department a few years ago: "It matters not how conscientious or skilled a physician may be or how well organized the public clinics are, there still will be found great numbers of individuals who neglect to take the minimum treatment necessary to prevent relapse, and a far greater number who do not obtain treatment in amount sufficient to prevent the recurrence of the late manifestations of the disease."

If I were called upon to place the blame for the prevalence of syphilis in the United States, I would not lay it at the door of either the every day doctor, the local, the State or the United States Public Health Service. I would say that *nationally* we lack a system of management of all the venereal diseases, which offers the either immediate or the ultimate hope of subduing or lessening them. That identical want of adequate, sensible regulation and wise prevision is permitting the killing, mutilating malady called granuloma inguinale to spread among us in the same unchecked, moronic manner that syphilis has already done and still contiues to do. We must do here in America what has already been done in certain European countries; we must put syphilis at the mercy of the health authorities and the every day doctor, instead of leaving our people, as we now do, at the mercy of syphilis.

Due to government interest in the disease, and regulation of it, the amount of syphilis has been reduced in the last few years as follows in these countries: England, 30 per cent; Germany, 31 per cent; Denmark, 50 per cent, and Sweden, 85 per cent. Syphilis is treated by every day doctors in those countries also. Since we do not concede the every day doctors of Europe to be more intelligent than their American confreres, it must be that the scheme under which they work over there is much superior to the one that is followed here. What else can it be?

Therefore, it is not necessary for the United States to break virgin ground in which to plant the seed of the suppression of syphilis. All that is needed here is to adopt, or to perfect, the best features of the control measures that have been put into being in countries like England and Sweden.

The New Deal has rudely clouted our once impossible banking system into a more responsible state; it is preparing to deal a sickening blow to the reign of terror which is so fecund of gangsters, racketeers, and other criminals; so, at the same time, why not resurrect the corpse of the emergency health intervention act? It is dead as far as syphilis is concerned, it seems. As you know, this measure permits the United States Public Health Service to concern itself with local and state health affairs in emergency.

Then, let us bedeck this revivified measure in raiment of semi-European hue and cut; spirtualize it with reciprocal *bon comraderie* between the every day doctor and the various public health agencies; fill its war chest, and send it forth to do nation wide battle against syphilis.

As the every day doctor, who is writing this, sees the issue, he cannot, in justice to himself and in fairness to his people, accept the buck from Dr. Clark. With warmest admiration for Dr. Clark personally (of which sentiment Dr Clark is fully aware), and with the highest opinion of his sincerity and humanitarianism, the undersigned makes bold to pass the buck back to the United States Public Health Service through Dr. Clark with the mature suggestion that that organization lay this grave and pressing issue of syphilis before the President of the United States; impress him with the fact that it is our greatest public health problem, and request him to create a National Venereal Council for the purpose of devising ways and means successfully to combat the venereal plague which slowly, silently, stealthily, but none-the-less surely ravages us.

Patriots and humanitarians all, let us quit passing the buck: let us do as Sweden has done; let us *also* ally ourselves together against syphilis, and crush out 85 per cent of *our* infections in the next ten years. I suggest this not only for the incalculable benefit of living Americans, but also in behalf of the generations yet unborn.

Norfolk, Va. THOMAS V. WILLIAMSON.

Proceedings of the Medical Society of Virginia

EXPLANATORY NOTE.—The Council of the Medical Society of Virginia, at its meeting on January 16, 1934, unanimously adopted the following and ordered it to be published in full in the February issue of the MONTHLY.

A REPLY to MESSRS. SHIRLEY CARTER AND W. I. WHEARY

With a Brief in Support of Certain Legislation to be Proposed by the Medical Society of Virginia Relative to the Management of State Hospitals for the Insane.

This communication is in reply to a pamphlet printed over the signature of Mr. Shirley Carter and Mr. W. I. Wheary,[1*] entitled,

"THE PRIVATELY OWNED MENTAL SANATORIUMS
Versus
THE STATE OWNED MENTAL SANATORIUM."

We are advised that this pamphlet has been given wide circulation, especially among members of the General Assembly. It can have only one ultimate object, namely, to influence pending legislation. What is that legislation, and what will be its effect?

The whole purpose of the pamphlet seems to be to throw down a barrage, thereby to divert attention from the main objective, which is to put over a bill to legalize what is now being done illegally.[2] Their point of attack is upon two physicians of the Commonwealth of Virginia, singled out for attack presumably because they are interested in private sanatoria for the treatment of nervous and mental diseases, and are, therefore, selfishly interested in destroying the DeJarnette Sanatorium. Let it now be put into the record specifically that this present publication is in no sense an apology for, nor a defense of, any physicians or private sanatoria, and any attempt to construe it as such is plain camouflage.[3]

Obviously, the pamphlet to which this is an answer is not official: it is not issued with the authority of either the General Hospital Board or the Special Board of the Western State Hospital. If not official, then the publication is purely personal, reflects merely the personal views of the signatories, and is prompted by personal bias. Superficially, then, it would seem to deserve no more consideration than the strictly personal opinion of any other two citizens of the Commonwealth.

But, in reality, the attack is made by these two members of the State Hospital Board upon the organized medical profession of Virginia, for *the Medical Society of Virginia passed the resolutions of which these gentlemen complain and published them in its official journal.* These resolutions are set forth in full in the appendix.[4]

This present publication is, therefore, official, in contradistinction to the pamphlet of these two gentlemen. It represents the opinion of the Medical Society of Virginia, and this Society, in turn, speaks for the organized regular medical profession of the Commonwealth of Virginia.

Furthermore, since this pamphlet makes certain erroneous statements with the finality of fact, and since it creates a smoke-screen through which it is impossible to discern the facts, it becomes necessary for the Executive Council, the official *ad interim* body of the Medical Society of Virginia, to reply.

So much to make plain the truth that whatever in the resolutions of which *these gentlemen complain is ridiculous or false, malicious or libelous*, is not the personal views of any two or three selfishly-minded or misled individuals, but is the official action of organized medicine in Virginia, and this reply has like weight.

It is remarkable that these resolutions pass the critical scrutiny of these two gentlemen with only one allegation of false statement. The sentence to which exception is taken is: "that the surplus thus derived from the operation of the DeJarnette Sanatorium is being retained by the officers of the Western State Hospital, and not turned back to the State treasury." It is more remarkable still that we

*Such figures in the text refer to comments appended to this paper.

can prove that in this instance we are simply paraphrasing the *signed statement of Dr. DeJarnette himself*. We cite his answer to Question 42, one of several questions addressed to him by Dr. J. K. Hall, a member of the General Hospital Board, and answered by Dr. DeJarnette under date of August 22, 1933: The question and answer follow:

"Question 42: Why is a charge made for the treatment?

A: To pay the expenses of people who were not willing to accept care and treatment at the State hospital, and *to make a profit to be used for extra comfort for the patients at the Western State Hospital* (italics ours), and enable us to furnish treatment at a moderate charge, which is from $500 to $1,000 per year less than the average sanatorium."

The pamphlet indicates that it quotes verbatim a communication from Mr. J. H. Bradford, Director of the Budget of the Commonwealth of Virginia. If Messrs. Carter and Wheary are willing to rest *their charge of falsehood and libel* upon such a flimsy foundation as Mr. Bradford's letter, we are content. In fact, Mr. Bradford's letter says nothing, except that "the law requires all revenues collected by State agencies to be paid into the State treasury, and this procedure must, of course, be followed in the case of . . . the DeJarnette Sanatorium" and such is his understanding of the way these funds have been handled.

It may be the fact that the net earnings of the DeJarnette Sanatorium have been deposited with the State treasury, and segregated on the books of the treasurer to the account of the Western State Hospital, to be spent as occasion arises at the Western State Hospital. If there is any material difference between this manner of handling these earnings of the Sanatorium, and the manner in which the resolutions affirm, then we apologize. Maybe we relied too much upon Dr. DeJarnette's statement. Notice, please, no one has accused Dr. DeJarnette of withholding this money for his personal use, though these gentlemen very indignantly say so.[5-6]

There is a booklet under the title, "The DeJarnette Sanatorium". This is a very handsome advertising medium. It contains absolutely nothing to identify the Sanatorium as a unit of the Western State Hospital, nor does it in anyway designate it as a state institution.[7] In this booklet an examination charge of $20 is prescribed. Nothing is said of the disposition of this charge. The rates are put at $28 to $35 per week.[8] This basic rate is not one cent less than the average basic rate at the privately-owned hospitals of Virginia, and is about $1 per day less than the basic rate prevailing at the three privately-owned nervous and mental sanatoria operating within the State.[9]

The existence of this booklet and its contents go to show how far the present DeJarnette Sanatorium has drifted away from its original conception and purpose. We are told in this pamphlet of Messrs. Carter and Wheary of the original conception and plan of Dr. DeJarnette. We state emphatically that the plan as originally proposed and approved by the several agencies mentioned, namely, the General Hospital Board, the Legislature and the Governor, and the institution as at present administered and used, are as far apart as the poles. *Originally*, it was understood that this institution was to be a colony of the Western State Hospital, *a part of it*, where a selected group of patients of the parent institution could be segregated for special study and treatment. *Instead*, it is operated as if it had no connection with the Western State Hospital, just as if it were a private sanatorium, admitting patients who are not listed as patients of the Western State Hospital, *nor necessarily citizens of the Commonwealth of Virginia.*

The taunt is thrown at us, why, if the doctors of Virginia are so much incensed at the commercialization of the practice of medicine by the State Hospitals for the insane, they are not equally incensed at the activities of the Board of Health, the Tuberculous Sanatoria of the State, the hospitals of the medical schools, etc. We set forth the answer to this question in the appendix,[10] where those who are interested may read, but suffice it here to say that the Medical Society of Virginia appointed, under the same resolutions complained of, a special committee to investigate all governmental interference with private practice. This committee has been very diligent and searching in its inquiry. It now reports to the Executive Council that its study has not yet been concluded, but so far its inquiry does not reveal pernicious practice on the part of

any State agency, *other than that of the Western and the Southwestern State Hospitals.*

Since the matter of the State Laboratory has been specifically mentioned, however, we might say that the State Laboratory does not charge *anything for its services*, and is not permitted to do so.

Furthermore, the State Tuberculous Sanatoria, also brought into the picture, charge only $1 per day when any charge at all is made.

The hospitals of the medical schools likewise make only a nominal charge for their clinical patients.

It should be recalled at this point that the resolutions of the Medical Society of Virginia to which Messrs. Carter and Wheary except, were also directed against the irregular practice at the Southwestern State Hospital at Marion. These gentlemen do not undertake to defend the practice of the staff of the Hospital at Marion, except in a general way. But, since the practices at Marion are under equal condemnation with those at Staunton, and since the nature of the offenses at the two institutions is not the same, the resolutions dealt with the two situations differently.

The staff of the Southwestern State Hospital was found guilty by the General Hospital Board of *practicing medicine and surgery upon persons who had no symptoms of mental disorders*, who in most instances were not indigent, who usually were not cases of emergency necessity. The recommendation of the Board, upon stating this finding of fact, is to the effect that all such practice within and without that institution be discontinued, except proper consultations and acute emergencies.

The full significance of this finding of the Board and the effect, or lack of effect, of its "recommendations" upon this irregular practice must be appreciated in order to understand remarks we shall make in a few moments.

In spite of this unanimous finding and conclusion, the practice of medicine and surgery upon non-insane patients, who are not indigent and not "acute" emergencies, continues.

It is pertinent to ask why the General Hospital Board had to content itself with simply making a "recommendation" to the Special Board in this case. Why did not the Board pass its own orders?

The answer lies in the fact, not generally appreciated, that the General Hospital Board seems to have no direct control over any of the State Hospitals! In fact, there is no agency of the State so loosely controlled or administered as these State Hospitals for the Insane. The Commissioner of Public Welfare is *ex officio* a member of the General Hospital Board, but he is not its statutory chairman. There is no chairman fixed by law. He has no authority nor control whatsoever over these hospitals. He does not cast a vote except in case of a tie.[11]

The Special Board of each hospital is its governing body. But, since the superintendent is practically, if not actually, the creature of the Special Board, he can "get by" with most anything, so long as he is in accord with the controlling element of his individual board. Hence, in a very real sense, the superintendent may do very much as he pleases with this immense investment of the people's money, and with the fortunes of the one or two thousand helpless inmates of that State Hospital.

It is for these unfortunate mentally diseased people, perhaps some nine or ten thousand of them, that we are pleading, when we ask that some curb be put upon the extravagant plans and purposes of the gentlemen in control of these two institutions.

Can it be supposed for a moment that the organized medical profession of Virginia would stultify itself by pleading the cause of three physicians and of the ownership of three private sanatoria, or even of the entire profession, as opposed to the interests of two and one-half million people of Virginia? When, before, has the profession of medicine as a body been accused of seeking its own interests at the expense of the people whom it serves? Yet this is exactly the accusation that these two gentlemen bring. On the contrary, we proudly affirm that even during these desperate times, the physicians of Virginia have stood steadfast to the trust committed to them, to their mission of relieving sickness and distress as best they can, without regard to ability to pay, even when they themselves were weighted down with debt and inability to meet even the expense of practice. And, so far, the medical profession has not asked relief through the expenditure of State funds.

The interest of the physician is the interest of the public which he serves, and it is vicious to try to set the physician and the public in opposing camps. The rights of the physician are simply and solely his rights as a citizen of

XUM

the State. *As such, he has the same rights of protection of his property and his business as any other citizen of the State has.*[12] Is the physician restrained from seeking to protect his business or his investment merely because he is a physician, or owner of a non-subsidized hospital or sanatorium?

But it happens that the rights of physicians in this present instance are not in conflict with the interests of the mentally diseased, even though these gentlemen try to make it appear so.

Today, the Western, the Eastern and the Central State Hospitals are literally crowded to their doors—or floors, for ninety patients at the Eastern State Hospital are actually sleeping on the floors because there is no room there to set up beds for them—while Dr. DeJarnette operates a splendid quasi-private sanatorium with thirty patients and a bed capacity of fifty-two.

Today, eight graduate nurses minister to thirty patients in that sanatorium, some of them neither citizens nor taxpayers of the State of Virginia, while in other State Hospitals other patients, some of them members of distinguished and honorable Virginia families, wallow in their own fifth or feed themselves with their fingers, because there are not attendants enough to supply them with the ordinary decencies of human life.

Today, Dr. Wright, Superintendent of the Southwestern State Hospital, deplores through the medium of the public press the fact that several of his buildings, as well as those of other State Hospitals for the insane, are fire-traps, and yet while he was talking they were treating the non-insane, non-indigent, non-emergency patients in a most elaborately, even extravagantly, built and equipped fire-proof medical and surgical unit of 125 beds. By its very construction, arrangement and equipment, this unit called the Harmon Medical Center was never planned for the care of anything but the private and semi-private patient. Had the State appropriation spent thus been spent upon fire-proofing the buildings housing the genuinely and helplessly insane under his care, Dr. Wright would have no cause to deplore his unwise expenditure of the taxpayers' money, nor dread the horrible catastrophe of fire trapping these helpless individuals.

Besides, both Dr. DeJarnette in the one case and Dr. Wright in the other would have really served the interest of their unfortunate, helpless, pitiful patients, had they thought less of their personal or institutional ambitions, and more of the real needs, not only of their own patients, but *of the inmates of the State Hospitals at large.*

In other words, *the present situation indicates the evils of a lack of centralized control and administration of all State Hospitals as a unit.* At present, each Special Board is in active competition with every other special board to acquire for its own institution appropriations and privileges equal to or surpassing that of the others. Furthermore, when these several special boards meet as the General Hospital Board, each having its own ax to grind must indulge in the popular game of "log rolling." It is natural under such circumstances that the interests of the whole patient population, and of the prospective increase of this population, is not always uppermost in the board's mind.

To find the remedy for such a condition is the thought uppermost in the minds of the Medical Society of Virginia when it passed the resolutions now under fire of Messrs. Carter and Wheary. As one such remedy we propose for serious consideration the proposition that all State Hospitals for the Insane and the Colony for Epileptics and the Feeble-minded should be put in charge of a *Commissioner of State Hospitals*, appointed by the Governor and responsible to him. This commissioner should be given clear authority, and charged with the duty to act as the executive head of the General Hospital Board. He should not serve on the Special Board of any of them, but should frequently inspect the several institutions. He should make recommendations with the entire situation in mind, to improve conditions in all so far as possible, rather than special favors and privileges for the sake of the few.

The Commissioner of Public Welfare is probably not the proper person to be further burdened with these enlarged duties and responsibilities. He is not a physician and his training and activities presumably lie in other channels. Nor would the Medical Society of Virginia advocate the creation of another officer of State government. Fortunately, this is not necessary. We suggest that it may be perfectly logical, appropriate and practicable to appoint the *Commissioner of Health to be also the Commissioner of State Hospitals.*

It should be stated explicitly that this suggestion was formulated without the knowledge of the present Commissioner of Health. But what appointment could be more natural! The insane person is a diseased person, even though his disease be mental rather than physical. Why not put a physician in charge of the mentally diseased as he is today in charge of the tuberculous?

Finally, it should be distinctly understood, if it has not already been made clear, that the physicians of Virginia are not seeking in any manner to hamper the development either of the physical properties of the State Hospitals, or means of rendering their inmates more comfortable, or of expediting their return to health. On the contrary, these are the exact desiderata for which we are contending. We ask only that these boons be not limited to the fortunate few at the DeJarnette Sanatorium and the Harmon Medical Center, but wisely expended for the good of the entire patient personnel of all State Hospitals.[13]

With this single end in mind, we are recommending and urging *two additional clear-cut propositions*, to-wit:

First: *No patient shall be admitted to a State Hospital for the Insane, nor to the State Colony for Epileptics and the Feeble-minded, nor to any unit, extension or addition of the said hospitals or colony, except as the patient is legally admitted because of mental disease, epilepsy, feeble-mindedness, drug-addiction or inebriety.*

Second: *No patient admitted to any of the afore-mentioned institutions shall be charged any fee or hospital charges, or any charge of any sort whatsoever, except such charges as may be made to the United States Government under contract for the care of veterans.*

End the commercial motive, the lure of profit, for admitting patients to State institutions, and the practice will cease. Then, buildings, equipment, appropriations, the time and thought of the staff and nursing personnel, now diverted to irregular and unauthorized activities, can be directed to the legitimate purpose for which State Hospitals were intended. In this way, and in this way only, will the intolerable conditions now prevailing in these State Hospitals for the insane be corrected.

Submitted under authority of the Constitution and By-Laws of the Medical Society of Virginia, by its Executive Council.

R. D. Bates, M. D., *President*,
Agnes V. Edwards, *Secretary*.

Appendix

(1) Messrs. Carter and Wheary are two of the three members of the Special Board of the Western State Hospital at Staunton. Dr. J. C. King is the third member.

(2) The Executive Council of the Medical Society of Virginia is reliably informed that a bill, a copy of which the Council has seen, has already been introduced in the General Assembly. This bill permits the officers and Special Board of the Western State Hospital and/or the DeJarnette Sanatorium to admit patients, whether they be citizens of Virginia or not; to charge them primarily sufficiently to maintain the Sanatorium, *or more*, at their discretion; to segregate on the books of the State Treasury these earnings to the account of the DeJarnette Sanatorium, to be used for further extension of the plant.

The very fact that such powers and privileges are now being requested of the Assembly indicates that similar practices in the past were admittedly illegal.

(3) It happens that the two physicians under attack, Drs. Jas. K. Hall, of Richmond, and J. C. King, of Radford, are also members of the General Hospital Board, of which Messrs. Carter and Wheary are members. Dr. King is actually the third member of the Special Board of the Western State Hospital, to which Messrs. Carter and Wheary belong. And yet Dr. King was not consulted in the preparation of this pamphlet.

(4) *Resolutions Concerning Irregular Practices at Certain State Hospitals*

Whereas, The General Hospital Board has recently found that the medical officers of the Southwestern State Hospital have been practicing medicine and surgery at that institution on persons who have not been legally admitted to this Hospital; and that the Western State Hospital has built and is operating a detached unit for the care and treatment of a class of psychotics and neurotics, not all of them citizens of the State of Virginia, and none of them listed as patients of the Western State Hospital, to be charged in excess of the cost of maintenance at that institution, and yet less than the bare cost of maintenance in any private institution; and that the surplus thus derived is being retained by the officers of the Western State Hospital, and not turned back to the State treasury.

Whereas, The medical officers of the five State institutions for insane are paid salaries and other perquisites of office adequate to maintain them and their families; and these salaries are derived from general taxation, and physicians are taxed for this purpose by assessment equal to that of all other citizens.

Whereas, Practice of this sort is a long step toward a situation even more obnoxious than "State Medicine," for in these present instances only a small fraction of the total physicians and institutions of the State are subsidized at the expense of the many non-subsidized.

Whereas, Profit-making by the State at the expense of any class of its sick people is wrong, ethically speaking, because it is tainted with com-

XUM

mercialism; and unfair, because such practice puts the State into direct and destructive competition with a profession and business universally admitted to be a necessity in civilized society; and, furthermore,

Whereas, Any use of the property and the facilities of the State for private gain, including the private practice of medicine, is, in our opinion, illegal, if not actually unconstitutional; and failure to pay into the State treasury any surplus which the institution may have at the close of any fiscal year is also illegal, in our opinion; and yet

Whereas, There are intimations that efforts will be made to legalize such illegal practices by legislative enactment: Now, Therefore,

BE IT RESOLVED by the House of Delegates of the Medical Society of Virginia, in regular session at Lynchburg, Va., on October 25, 1933,

First. That we, speaking for and in behalf of the organized regular medical profession of the State of Virginia, hereby express our commendation of the action of the General Hospital Board in the two specific instances mentioned above, insofar as this action went into the matters complained of; and that we request this Board to be diligent to see that its recommendations are faithfully complied with. For we realize that the wording of the resolutions of the General Hospital Board in each of these two instances leaves room for wide evasions.

Second. That we hereby record our definite and vigorous opposition to any and all practice of medicine at and from a State institution, except that practice for which each of the said hospitals was intended.

It is the plain intention of the State, when employing the medical staff of a State hospital, to employ a personnel adequate to render efficient service to the inmates of the said hospital, *and for no other purpose*.

Efficient service to one or two thousand insane individuals, for instance, is presumed to require the full working time of each member of the staff.

If, therefore, the members of the medical staff of any State hospital have time to devote to other practice, one of two conclusions is inescapable: namely, either this staff is overmanned, or the duties for which the members are employed are being proportionately neglected.

Either conclusion is intolerable.

Therefore, it follows that the State-employed physician should divorce himself absolutely from all other practice, and should devote himself exclusively to the duty for which he is employed.*

*If the above reasoning be sound, it is immaterial and beside the point whether or not fees be charged. For, in either event, the tax-supported State-employed physician deprives other physicians of their rightful opportunity to earn and receive legitimate fees which would have been theirs had not these State-employees taken over the service.

If, however, fees be charged and retained by the State-paid physician, he compounds the offense by privately practicing on or in State property, and by using public facilities for private gain.

If, on the other hand, he extends his services gratuitously to those who are able to pay, he further offends by pauperizing that part of the public, with all of the evils growing out of such a process.

The same reasoning applies in the case of admittance to a State institution on the grounds of "policy," personal friendship, or non-dependent kinship to an employee.

Likewise, if the time of the staff is fully occupied with its regular duties, it has no time to devote to the "pauper patient," whether a genuine pauper, a semi-pauper or a pseudo-pauper.

Nor is the allegation of general "emergency" an adequate excuse for such practice. With the present-day spread of physicians, surgeons and hospitals, and with the development of highways and means of transportation, the occasion is so rare that it is almost non-existent which will justify the admittance of a medical, surgical or obstetrical emergency to the care of a staff of psychiatrists, for example. The more devoted the staff to its special work, the less time the personnel has to care for the general emergency, and the less its desire for such work.

Third. That we also oppose and protest the use of any building or unit of a State hospital in any way to derive a profit from operation: whether the patient be committed by process of law, or enter the institution voluntarily; whether the patient be a citizen of this State, or not; whether the said profit be derived from physician's fees, or from hospital charges; whether the illness causing admittance be in line of said hospital's work, or outside of the special character of such work; and whether the said profit is to accrue to the medical staff, or is to be entirely expended upon capital improvements of the said hospital, or is to be turned into the State treasury.

Fourth. That a copy of these resolutions, certified by the President and Secretary of this Society, be placed in the hands of the Governor of the State of Virginia and of the Commissioner of Public Welfare (who is *ex officio* chairman of the General Hospital Board), as reflecting the considered opinion of the medical profession of the State.

Fifth. That we hereby instruct the Legislative Committee of this Society to be alert to detect any effort which may be made to legalize by legislative enactment such practices as we are condemning herein, whether such effort be made openly, or by "rider" to an otherwise inoffensive legislative bill; and if such bill be introduced, to oppose its passage with all the weight and influence of the organized medical profession of the State.

Sixth. That we regard the two above mentioned situations significant, furthermore, because they are two specific instances of the encroachment of all units of government—Federal, State, county and municipal—insidiously, but steadily and unrelentingly, upon the private practice of medicine. In other words, they are but milestones in the progress toward "State Medicine."

That a committee of five be appointed from various parts of the State, none of whom shall in any way be connected with the State, municipal or county health department, or necessarily a member of the House of Delegates, to investigate any condition where physicians employed by the State, city, or county as health officers or otherwise, seem to be practicing medicine or using equipment owned by the State in competition with licensed practicing physicians and surgeons; that they shall file their report, together with any recommendations, with the Council of the Medical Society of Virginia in time for their mid-winter meeting, which is usually in January.

Seventh. That, if funds in excess of those already allocated to the Legislative Committee be necessary to carry out the purpose of these resolutions; and if funds be required by the Special Committee herein provided for; and if in each instance the President of this Society approves: either Committee, or both, is hereby authorized to draw upon the general funds of this Society, not otherwise appropriated, for a sum not to exceed $_____, or as much thereof as may be needed to discharge the purpose of these resolutions.

(5) In either event, the account of the DeJarnette Sanatorium seems to have been irregularly handled. First, because the law says all net earnings of State agencies shall revert to the *general fund* of the State treasury, and be re-disbursed by act of the General Assembly. Second: Any money earned at the DeJarnette Sanatorium is unlawfully earned. Dr. DeJarnette signed the statement that *patients of the DeJarnette Sanatorium are not patients of the Western State Hospital*. Therefore, they are not patients of the State of Virginia. Then, they were not law-

fully admitted to any building or unit built, equipped and maintained out of State funds. From which it follows that Dr. DeJarnette had no legal right to collect any charges whatever from the patients of the DeJarnette Sanatorium.

(6) That these earnings are considerable is indicated by the fact that the net earnings of the DeJarnette Sanatorium in one year alone were at least $15,000.

(7) . . . unless, indeed, one happens to know that the three gentlemen who constitute the special board of the Western State Hospital are identical with those named as the "Board of Directors" of the DeJarnette Sanatorium.

(8) Why should the State of Virginia be interested in caring from its public funds for citizens who can pay $28 to $35 weekly and indefinitely for hospital treatment?

(9) In the pamphlet under review the DeJarnette Sanatorium is referred to as the sanatorium of the citizens of Virginia. True as this is in one sense, when we consider the facts that all State institutions operate without capital charges, without taxes, insurance and upkeep expenses; with salaries of personnel from the highest to the lowest paid by the taxpayer; with the privilege of making all purchases of supplies through the State Purchasing Agency, far below the usual market prices; the rates advertised at the DeJarnette Sanatorium become appalling rather than a boon to the distressed citizenry of Virginia, as Dr. DeJarnette contends.

(10) There is no general complaint against the present fundamental activities of the State Board of Health. Offenses have occurred, through mistakes and misunderstandings. But at this time there is splendid cooperation between the Board of Health and physicians in practice. Most important, physicians of Virginia are assured of a sympathetic and attentive hearing upon any point of disagreement that may arise in the future.

Let it be admitted that the State Tuberculous Sanatoria should be on exactly the same basis with regard to charging their patients as are the hospitals for the insane. There is no solid reason in fact why the one class of patients should be charged by the Commonwealth, and the other not. Ultimately, that is when it becomes possible and practicable, the tuberculous in the State Sanatoria should also be full wards of the State.

However, it should be remembered that the patient of the tuberculous sanatorium receives the same care and treatment whether he pays $1.00 a day or nothing. Contrast, on the other hand, the patient in the DeJarnette Sanatorium or the Harmon Medical Center with the deplorable condition of the average patient in the several State Hospitals for the Insane.

To refuse to admit that the hospitals of the medical schools are in a class apart from State Hospitals for the Insane is insincere. Medical schools must have clinical material for purposes of instruction. In the absence of huge endowment, this clinical material must be provided for by the State.

Of course, this privilege of the hospitals of the medical schools should never be abused, but experience has demonstrated that teachers of the applied branches of medical science such as medicine, surgery, obstetrics, etc., must have some private practice, to keep themselves capable teachers of the science and art of medicine. Furthermore, if they are not allowed this means of augmenting their meagre salaries, it will be impossible to secure and retain reputable and respected teachers.

(11) The General Hospital Board is composed of fifteen men and women who are the Special Boards of the four State Hospitals for the Insane and the Colony for Epileptics and Feeble-minded. They meet as a general board at the several institutions in succession, hear what reports, etc., may be submitted to them, spend a pleasant social hour or so at lunch provided for them by the institution, take a stroll, perhaps, through the grounds and buildings, and then depart for their several homes.

(12) Let us propose a hypothetical situation: Suppose you owned a department store in Staunton or Marion. Suppose that the great State of Virginia should establish well-stocked State stores in these two towns, and properly accredited wards of the State were permitted to draw without cost upon these stocks. Now, suppose the managers of these State stores should determine that they were overstocked with goods, goods for which they had not paid a penny, and should actually sell these State-purchased goods in your market at a price below your power to purchase:

Would it not be absolutely indifferent to you what these managers did with the proceeds of such sales? Would not such action threaten to bankrupt your limited business resources? Would you not feel, therefore, that you had some rights in the premises, and would you not protest and fight against such unfair competition with all the vigor and all the remedies at your command?

If your answers be affirmative, we submit without fear of contradiction that a strictly analogous situation is presented by the unfair practices of these two State institutions in competition with private physicians and hospitals.

(13) We cannot understand the statement of the pamphlet to the effect that the resolutions of the Medical Society indicate that it (the Society) will maintain a "paid lobby" at this session of the General Assembly. Surely, if one be looking for malicious utterances, this is one. No one can read into these resolutions anything more than that the payment of actual and legitimate expenses only is contemplated. The fact is that the Medical Society of Virginia is not maintaining a paid lobby for any purpose, that any physician who appears before this Assembly in this matter does so with the knowledge that his recompense can be only that satisfaction which comes from having discharged a public duty.

Woman's Auxiliary, to the Medical Society of Va.

President—Mrs. William Lett Harris, 1112 Matoaka Street, Norfolk.
President-Elect—Mrs. Joseph Bear, 3012 Monument Avenue, Richmond.
Recording Secretary—Mrs. Fletcher J. Wright, 49 South Market Street, Petersburg.
Corresponding Secretary—Mrs. Charles A. Saunders, 1000 Gates Avenue, Norfolk.
Treasurer—Mrs. Reuben F. Simms, 2034 Park Avenue, Richmond.

Organization Meeting of the Mid-Tidewater Auxiliary.

On Tuesday, January 16th, a meeting was held in Richmond at the Academy of Medi-

XUM

cine Library for the purpose of organizing an auxiliary among the doctors' wives of the Mid-Tidewater Medical Society. Several women from the Mid-Tidewater Section were present and Mrs. Hawes Campbell, of Enfield, was elected president of the new sectional organization. Mrs. A. W. Lewis, of Ayletts, was appointed first vice-president and Mrs. Horace F. Hoskins, of Saluda, second vice-president. It is planned that Mrs. Campbell and her two assistants will try to organize local chapters in each county included in the section with their own local chairmen and other necessary officers. Mrs. Campbell will also appoint her own secretary and treasurer. There was much enthusiasm and this new auxiliary promises to be a valuable addition to our State forces.

Mrs. Joseph Bear, who is organization chairman as well as president-elect for the State, presided at this meeting and Mrs. Latane Flanagan, of Richmond, acted as secretary.

Mrs. Southgate Leigh, of Norfolk, represented Mrs. Wm. Lett Harris, State President, who was unable to attend the meeting.

Mrs. Meade Edmunds, President of the Petersburg Auxiliary, was also present in an advisory capacity.

The group lunched together and the business meeting ended in a most pleasant social affair.

An Addition to the S. M. A. Auxiliary.

The Auxiliary to the District of Columbia recently joined the Southern Medical Association group. Women from Washington attending the Southern Medical meeting, held in Richmond in November, were so pleased with the spirit of the meeting and the splendid work being done by the Southern Medical Auxiliary that they were moved to cast their lot with us in Dixie. Thrice welcome to our D. C. sisters!

The Norfolk Auxiliary,

At its January meeting, decided to take a booth at the Mardi Gras, an affair being sponsored by "The Colonial House," a Norfolk Museum. They are making plans for raising funds in this way for their work this year. One of the attractions to their booth will be a series of moving pictures illustrating different phases of health work in the State and elsewhere.

Board Meeting.

The next State Auxiliary Board meeting will be held in Norfolk, probably in April. Mrs. James Blake, of Hopkins, Minn., who is our National president, is planning to come to Virginia at that time. This will be her first visit to Virginia and we are looking forward with eagerness to her coming.

Mrs. Harrell Honored.

We feel ourselves honored in the fact that Mrs. C. Lydon Harrell, of Norfolk, Va., has been appointed to the National Board as chairman of *Hygeia* for the Northern Division.

Auxiliary to the Post-Graduate Medical Association of Southern Virginia.

At a meeting of the Auxiliary, held recently, the following officers were elected: president, Mrs. Phillip Jacobson; vice-president, Mrs. Herbert C. Jones; recording secretary, Mrs. H. M. Snead; corresponding secretary, Mrs. Allen Barker; and treasurer, Mrs. William B. McIlwaine.

At this meeting a linen shower was given the Petersburg hospital, and it was believed that with the materials donated from many sources, the hospital will be in good shape for some time.

Truth About Medicine

In addition to the articles previously enumerated, the following have been accepted:

Eli Lilly & Co.
- **Ampoules Pentobarbital Sodium—Lilly 0.5 Gm. (7½gr.)**
- **Ampoules Sodium Amytal 0.125 Gm. (1⅞ gr.) for Intramuscular Use (Lilly).**
- **Pulvules Sodium Amytal 1 Grain (Lilly).**

National Drug Co.
- **Antimeningococcic Serum, two 15 c.c. double end ampoule vials packages.**
- **Antimeningococcic Serum, one 15 c.c. cylinder package.**
- **Antimeningococcic Serum, one 30 c.c. double end vial package.**
- **Diphtheria Toxoid, twenty 1 c.c. vials package (ten immunization treatments).**
- **Rabies Vaccine—Human (Semple Method), four 2 c.c. syringes and ten 2 c.c. syringes packages.**
- **Typhoid-Paratyphoid Combined Vaccine, 30 vial package (ten immunizations).**
- **Typhoid-Paratyphoid Combined Vaccine, 150 vial package (fifty immunizations).**
- **Typhoid Vaccine, 3 vial package (one immunization).**

Schering Corporation

Neo-Iopax
- **Ampoule Solution Neo-Iopax, 20 c.c.**

Sharp & Dohme, Inc.
- **Antimeningococcic Serum, 30 c.c syringe package.**

PROPAGANDA FOR REFORM

Tolerances for Arsenic, Copper and Lead in Foods.—The Committee on Foods reports that arsenic, copper and lead compounds are highly toxic. Foods

may be dangerously contaminated with these elements by insecticide sprays, chemicals used in the manufacture of foods, factory processing equipment, and other means. Proper precautions should be taken in the culture, treatment, preparation, processing, packing, manufacture or preservation of foods that they shall not be contaminated with arsenic, copper or lead compounds. Foods to be eligible for acceptance shall not contain arsenic, copper and lead in excess of the tolerances established by the United States Department of Agriculture. (Jour. A. M. A., November 4, 1933, p. 1483.)

Lash-Lure.—There have been sixteen cases of severe untoward effects reported following the use of a single product called "Lash-Lure." This preparation is an aniline dye having for its base probably either paraphenylenediamine or paratoluylenediamine or some closely related substance. Every physician, and practically every responsible beauty parlor, knows the risk that is run in the application of dyes of the aniline type to the hair of the scalp. It has long been good beauty parlor practice to insist that persons who are to be subjected to an aniline hair dye should be tested for sensitivity to that product. Because of the irritating effects of such dyes, there is no justification for the use of so dangerous a substance around the delicate tissues of the eye. Cosmetics are under no national control. The Lash-Lure tragedies emphasize the need of some sort of national control over the sale of cosmetics. (Jour. A. M. A., November 11, 1933, p. 1566.)

Book Announcements

Medicine in Virginia in the Nineteenth Century. By WYNDHAM B. BLANTON, M. D. The third and last book of the series published under the auspices of the Medical Society of Virginia. Richmond. Garrett and Massie. 480 pages, with illustrations. Price, $5.00 to members of the Medical Society of Virginia.

Medicine in Virginia in the Nineteenth Century, the third volume of the history of medicine in the "Old Dominion," has recently come from the press and is a notable achievement.

The three volumes record the history of the medical profession as it performed its duties to the Commonwealth of Virginia, from the settlement in 1607 until the opening of the present century. The work was authorized by the Medical Society of Virginia in 1926-27, and under the authorship of Dr. Wyndham B. Blanton, of Richmond, two volumes have appeared and have received high praise from the medical press of the country and from numerous medical readers.

In attempting a brief review of the third volume, one may be pardoned if one shows a bit of partiality for it. This may be due, somewhat, to the fact that it records more recent events, portrays more modern conventions and institutions, and describes men of note nearer to our day and time, in the realm of medical history in Virginia. In this volume one may note with keen interest and satisfaction, the march of medicine through a century; approaching the opening of the twentieth century the genius of modern-medicine reflects achievements of great promise. These achievements have come to notable fruition in the first three decades of the twentieth century—the days of unprecedented advance in the art and science of medicine. No where, probably, between book-covers, may so striking a story in contrasts in medical progress be found.

Culled from innumerable medical publications of the century, from public and private documents, from the transactions, minutes, papers, addresses, and lectures emanating in medical meetings and societies, from accomplishments and achievements of prominent physicians and personalities of the period, the material of this book has been foregathered and skillfully written into an interesting volume. The publisher will necessarily produce a limited number. The edition, one may dare say, will be quickly absorbed by purchasers. This, and its companion volumes, will become more and more difficult to obtain. Before many years this series of books on medicine in Virginia will be rare and of high value. Every doctor, as well as dentist and pharmacist, who cherishes the history of medicine in this State, will naturally wish this and the other books of the series for his library.

The book possesses a wealth of historical medical material. To itemize here for our readers the subjects treated in the various chapters may be worth while as showing the scope of the work. It opens with a chapter on medical history of the 19th century in Virginia; then follows the story of medical education; the medical colleges; the medical societies; the medical journals; the progress of medicine and surgery; the development and expansion of specialism, with side lights on men and events; the sketch of the allied professions of dentistry and pharmacy; the leech-like grip of certain "cults" that flourished in Virginia; the hospitals, especially, of the Civil War period and the influence of strong personalities in shaping hospital-history in this State; the epidemics in Virginia; the description of medicine in the times of Confederacy; Virginians in the medical service of the Military and Public Health services of the United States; Virginia doctors as authors and their books; the

XUM

heritage of the medical career as shown by physicians of colonial families as they follow the profession from one generation to another; Virginians in medicine in other States; medical fees and practices of the period; Civil War surgeons; and medical legislation.

The book contains 500 pages. It is seven and one-half by ten and one-half inches, well bound and in pleasing type and of good paper. There are many interesting and rare illustrations. There are numerous engravings of the prominent Virginia physicians of the century. There are reproductions of the title page of publications and books of the period. Rare pictures of Confederate State Hospitals are displayed, and photographs and prints of the staffs of these hospitals are given. Pictures of the death-scene of General "Stonewall" Jackson and General Robert E. Lee are found in this medical record.

This, and its companion volumes, constitute a real contribution to American medical history. The interest and value of the material presented takes on more than local form, for what was inacted graphically in Virginia in medicine was quite typical of medicine in other regions in the country through the period of the nineteenth century. But there is that unique background that only Virginia can present in the period before, during and following the Civil War. In this regard, alone, this volume is of special value. Here is found a list of the medical officers of the Confederate States Army.

ALEXANDER G. BROWN, JR.

The Story of Childbirth. By DR. PALMER FINDLEY. Doubleday, Doran & Company, Inc., Garden City, New York. 1933. Octavo of 376-xx pages. With Many Illustrations. Cloth. Price, $3.00.

Dr. Palmer Findley is eminently qualified to write the Story of Childbirth. For years he has been a leader in the practice of obstetrics and gynecology, and a crusader for the better teaching of obstetrics. He is a Fellow of the American Gynecological Society and the American Gynecological Society and the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, and a past president of the latter. He was one of the founders of the Central States Association of Obstetricians and Gynecologists. Besides this he was an active spirit in the White House Conference on Child Health and Protection. This book seems to be the fruit of his labors in the White House Conference as it embodies many of the findings of that body.

As a background for the picture of present-day obstetrics, he has given us several chapters of primitive obstetrics gathered from mythology, obstetrics in ancient times and among more modern savages. There are several apparent contradictions, but then obstetrics itself is full of contradictions and perhaps they could not be helped. We are told in the text that childbirth among primitive peoples is a simple affair. The mother picks out a convenient brook, has her baby, bathes it and catches up with the tribe on its march. In early times, the North American Indians delivered alone in a secluded spot, washed themselves and their babies, and proceeded with their accustomed duties as if nothing had happened. In New Zealand, Central Africa, etc., on the other hand they make a public display of accouchement. The pictures that are shown of women being strung up to trees, or being tossed in blankets or otherwise pommelled about gives one an entirely different impression. Unfortunately there are no statistics available to help the reader to form an opinion as to the relative frequency of the "tree obstetrics" as compared to the "brook-side" technique. Our author, however, does not paint as rosy picture of primitive obstetrics as do most writers on this subject.

In chapter VI we are told to what extremes women the world over do to avoid the curse of sterility. These means were always grotesque and often repulsive. The same chapter shows the prevalence of criminal abortion. The oldest medical treatise in existence treats of it, and geographically it extends from the savages of Samoa to highly civilized peoples of Europe.

The chapters on Death of Pain, the Pestilence Carrier of the Lying-in-Chamber and the Lost Art of Obstetrics are exceptionally good. In the chapter on Birth Control, Dr. Findley gives the doctor's point of view. In chapter XII the author attempts to tell in a simple way something of the development of the fetus. This is difficult to do and the chapter falls below the standard of the rest of the book. We cannot agree with him that "menstruation is but a preparatory process for pregnancy." The preparatory process precedes menstruation, and menstruation occurs when pregnancy does not take place.

The book is exceptionally well illustrated.

The typesetting and proof reading in contrast, seem to have been hurriedly done. Eclampsia is spelled with an "x". Dr. De Normandie's name is spelled incorrectly and the father of anatomy has acquired an extra letter in his name. Poor old Eufame Macalyane who was burned at the stake in Edinburgh for trying to get relief from the pains of childbirth is re-christened Agnes Sampson.

If the purpose of the author is to get the public more intelligently interested in the obstetrics as it is taught and as it is practiced he has done well. I tried it out on several of my patients and they were delighted with the book.

M. P. R.

Mental Hygiene in the Community. By CLARA BASSETT, Consultant in Psychiatric Social Work, Division on Community Clinics, the National Committee for Mental Hygiene, Inc. New York. The Macmillan Company. 1934. Octavo of 294 pages. Cloth. Price, $3.50.

Miss Bassett is consultant in psychiatric social work of the National Committee on Mental Hygiene. She has written a very useful book and one that is instructive and interesting from the first page to its ending on the three hundred and eighty-sixth page. Too much written on mental hygiene has been of a hodge-podge character, sentimental, unrelated to reference and not backed by sufficient experience. None of this applies to "Mental Hygiene in the Community."

Miss Bassett has written a non-personal book, handling the various divisions of mental hygiene in a manner enlightening, accurate and still conducive to thought. Mental hygiene is treated in its relation to medicine, nursing, social service agencies, delinquency and law, parental education, the pre-school child, education and teacher training, the church and theological training, industry, recreations and psychiatric institutes and agencies. The book is complete, probably the most complete of any book on the subject. It should act as a reference book for students of mental hygiene, but it would also serve as good reading for anyone interested in the human being and his development in society.

The chapter on delinquency and law should be laid before the eyes of every lawyer so that he would, speaking of delinquents, cease to think "that the proper attitude to take is that of a harsh and bulldozing exponent of the heavily-handed rigidities of law."

B. R. T.

Annual Report of the Surgeon General of the Public Health Service of the United States. For the Fiscal Year 1933. United States Government Printing Office. Washington, D. C. 1933. Octavo of 128 pages. Cloth. For sale by the Superintendent of Documents, Washington, D. C. Price, 75 cents.

According to this report health conditions in most of the countries of the world were generally good during the calendar year 1932 as compared with preceding years. In the United States, the general death rate was the lowest ever recorded. Infant mortality and the death rates for tuberculosis, diphtheria, and typhoid fever also reached new low records. There were no unusual widespread epidemics, and the principal increases in the death rates were for cancer, heart disease, and other so-called "degenerative diseases." The birth rate in the United States continued to decline.

This book also contains full reports on the Divisions of Scientific Research, Domestic (Interstate) Quarantine, Foreign and Insular Quarantine and Immigration, Sanitary Reports and Statistics, Marine Hospitals and Relief, Venereal Diseases, Mental Hygiene, and Personnel and Accounts.

Annual Report of the Surgeon General, U. S. Navy. Chief of the Bureau of Medicine and Surgery. To the Secretary of the Navy. Concerning Statistics of Diseases and Injuries in the United States Navy. For the calendar year 1932. United States Government Printing Office. Washington. 1933. Octavo of 173 pages. Paper. For sale by the Superintendent of Documents, Washington, D. C. Price, 15 cents.

The health of the Navy for the calendar year 1932 shows an improvement in all phases as compared with 1931. There were 371 deaths from all causes, giving a rate of 3.35 per 1,000. Strange as it may seem, motor-vehicle accidents were the leading cause of death in the Navy for the year 1932, as it was in 1930 and 1931. Drowning continues to remain in the second place.

Protection of Motherhood and Childhood in the Soviet Union. By DR. ESTHER CONUS, Chief Physician of the Dispensary of the Institute. Translated by VERA FEDIAEVSKY. People's Commissariat of Health of the R. S. F. S. R. State Research Institute for the Protection of Motherhood and Infancy. State Medical Editorship. Moscow, Leningrad. 1933. Octavo of 117 pages. Paper.

Proceedings of the Twenty-seventh Annual Convention of the Association of Life Insurance Presidents. Held in the Waldorf-Astoria. New York, N. Y. December 7 and 8, 1933. Octavo of 259 pages. Paper.

XUM

Virginia Medical Monthly

Founded by LANDON B. EDWARDS, M. D., April, 1874
Owned by MEDICAL SOCIETY OF VIRGINIA since November, 1919
WYNDHAM B. BLANTON, M. D., *Editor*
AGNES V. EDWARDS, Richmond, *Business Manager*

PUBLICATION COMMITTEE
WYNDHAM B. BLANTON, M. D., Richmond, *Chairman*
J. H. NEFF, M. D., University H. A. TABB, M. D., Gloucester

All correspondence regarding editorial matters, articles, advertisements, subscription rates, etc., should be addressed to the Monthly, 1200 East Clay Street, Richmond, Va.
This journal is not responsible for the opinions and statements of its contributors.
All advertisements are received subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.
Subscription Price: $2.00 per annum in advance. Single Copies 25c.

VOLUME 60 FEBRUARY, 1934 No. 11

Editorial

A Convincing Answer.

Elsewhere in this issue of the MONTHLY the Executive Council of the Medical Society of Virginia has replied to an amazing pamphlet said to have been written and circulated by Messrs. Shirley Carter and W. I. Wheary, lay members of the Special Board of the Western State Hospital. Controversies of this character are distasteful to physicians generally, but in this instance principles are involved that make it incumbent upon every member of the medical profession of Virginia to read the statement of the Council and to support the position already taken by the Society.

Danger of Amidopyrin and the Barbiturates.

In view of the astonishing multiplicity of synthetic remedies that are now being offered to the medical profession, it is not surprising to encounter from time to time new drug idiosyncrasies. For a long time it has been well known that a drop of cocaine in the eye may occasion alarming symptoms, or that a single dose of antipyrin, quinin, belladonna or the continued use of arsenic or the compounds of iodin and bromin may be followed by marked and unexpected skin eruptions.

Latterly we have learned that carbon tetrachlorid and cincophen may produce serious and often fatal liver damage. We are now warned of danger from another quarter—old friends, the barbiturates, and what until now has been held the most innocent of analgesics, amidopyrin, are under suspicion.

If the opinion of Dr. C. H. Watkins of the Mayo Clinic in regard to the susceptibility of a few individuals to these preparations is confirmed, we must have in mind in future in administering these drugs the possibility of alarming damage to the bone marrow and the likelihood of provoking neutropenia, one of the most serious clinical pictures known to medicine.

Watkins advises that in all cases where the prolonged use of these preparations is contemplated periodic examinations of the blood should be made in order to discover early any significant depression in the white count.

Red Medicine.

Some time ago the American medical profession was much exercised over a report of medical conditions in this country purporting to deal with the cost of medical care and offering recommendations some of which at least were suspiciously suggestive of the socialization of medicine. The initial shock which this report gave the medical profession is no secret. Quickly recovering it settled down to the concerted policy of defeating all radical suggestions by an attitude of studied indifference. More might have come of this report had not public attention at that time been diverted by

other and more revolutionary events outside the field of medicine. In the meantime the Medical Society of Virginia studied the report through a duly appointed committee and in convention assembled approved only those recommendations which in its judgment embodied the salutary features of the report. At the same time organized medicine in the State gave an even more emphatic rebuke to socialization by refusing to have anything to do with Federal Emergency Relief.

It is unlikely that the present lull in the interest of the public will continue. A little reflection convinces one that our recent medical history shows many obvious trends toward the socialization of medicine in this country—enlarging dispensary services, enormous facilities for the hospitalization of war veterans, the popularity of group practice, the growth of health insurance, the prevalence of contract practice, and the expanding functions of the public health service. The forces directed at the socialization of health in this country are deep rooted and despite our present complacency promise to grow and continually reassert themselves.

Not the least important of these forces is an insidious propaganda aimed at arousing public sentiment in favor of a revolution in our American method of medical practice. *Red Medicine** by Sir Arthur Newsholme and John A. Kingsbury recounts in book form the results of an investigation financed by the Milbank Fund. It gives an exceedingly instructive and interesting account of medicine in Soviet Russia where the socialization of all health agencies now appears to be complete. The book is intended for popular consumption and in its latter chapters undertakes to contrast, often unfavorably, our system of practice with that of the Red Republic. Much is to be learned from the Russian experiment in the systematization of health measures. Physicans generally may resent pressure brought to bear by influences outside the ranks of their own calling, but they will do well to study all innovations which attempt to bring adequate medical attention within the reach of every individual regardless of class or economic status.

*Published by Doubleday, Doran and Company, New York, 1933.

Wanted—More Advertisers.

The income of the MONTHLY from advertisements has fallen off to about one-half of what it was formerly and by that much the publication has become an increased drain upon the ebbing finances of the Society. A curtailment in the number of pages we are now able to publish has been an inevitable consequence. If this situation was thought to be entirely dependent upon present economic conditions and therefore subject to no improvement until these conditions are changed words would be wasted in speaking of the matter at this time, but it is believed that the membership of the Medical Society of Virginia can do much now to arrest this progressively serious and hampering reduction in an important source of income to the MONTHLY. Former advertisers must be induced to return to the patronage of the MONTHLY. New advertisers must be secured. Pressure can be exerted from various directions by an alert and interested membership. Scan the advertising pages of this issue of the MONTHLY. Notice the old friends that have gone. Inquire why these friends no longer advertise. Interest yourself in securing for us advertisements from your own community. The MONTHLY enjoys a wide circulation, going to more than 1,800 members of the Medical Society of Virginia alone. Continue to patronize those who have loyally continued to support us.

Department of Clinica Education
OF THE MEDICAL SOCIETY OF VIRGINIA

Beginning of New Course in Prenatal and Postnatal Care.

A circuit of post-graduate courses conducted for the Joint Committee on Prenatal and Postnatal Instruction by its Field Clinician, Dr. M. E. Lapham, began on January 15th on the Peninsula, the eighth circuit of these classes since Dr. Lapham's work began. In the first week more than sixty physicians were enrolled and attended the opening meetings.

Detailed data in regard to the time and places of meeting, the enrollments and visitors and committees in charge follow:

RICHMOND: The class for colored physi-

cians meets on Mondays at 10:30 A. M., in the lecture room of St. Philip Hospital. Enrollments: Drs. J. H. Blackwell, F. D. Brown, F. J. Brown, S. A. Brown, W. M. T. Forrester, Z. G. Gilpin, V. J. Harris, I. A. Jackson, J. M. Newman, A. A. Tennant. Visitors: Drs. D. W. Davis, H. S. Martin, G. W. White.

Richmond: The class meets on Tuesdays at 2:30 P. M. in the lecture room of St. Philip Hospital. Enrollments: Drs. J. J. Anderson, R. D. Bates, Greer Baughman, Joseph Bear, Hawes Campbell, R. S. Faris, T. F. Gill, M. H. Harris, H. B. Hinchman, P. D. Lipscomb, L. C. Lush, A. C. Monroe, W. H. Parker, J. K. Richardson, H. C. Rucker, J. T. R. Sweeney, A. E. Turman, J. W. Turman, J. A. Wright. Visitors: Drs. P. Q. Daniel, M. H. Eames, Horace Hoskins, A. W. Lewis.

A particularly encouraging feature about this group is that fourteen of the enrolled members were members of the previous class in Richmond in the summer of 1932.

Another encouraging feature was the following paragraph of a letter from the Secretary of the Mid-Tidewater Medical Society, Dr. M. H. Harris:

"There were eight of our men present at the lecture this evening, and I know of two more who propose to take the course. I have been a little lukewarm about the course myself but after hearing the first lecture today I know that I cannot afford to miss any of them."

Newport News: The class meets on Wednesdays at 4:00 P. M. in the library of the Elizabeth Buxton Hospital. Local committee in charge of membership and clinical material: Dr. W. R. Payne, Chairman, Drs. B. E. Hunt and J. W. Sayre. Previously reported enrollments: 5. Aditional enrollments: Drs. G. C. Amory, O. T. Amory, B. L. Carleton, C. B. Courtney, W. S. Snead. Visitor: Dr. Antonio Gentile.

Williamsburg: The class meets on Thursdays at 2:30 P. M. in the Bell Hospital. Previously reported enrollments: 5. Additional enrollments: Drs. J. D. Clements, E. B. Kilby. Visitor: Dr. S. M. Knight.

Newport News: A class for the colored physicians of Newport News and Hampton meets on Fridays at 11:00 A M. in the Whittaker Hospital. Organization of the group in charge of Dr. R. A. B. Lloyd. Enrollments: Drs. Burl Bassette, Alexander C. Davis, W. P. Dickerson, E. C. Downing, Floyd W. Greene, W. T. Jones, R. A. B. Lloyd, I. B. McEachin, Anderson T. Scott and W. D. Young.

Hampton: The class meets on Fridays at 3:30 P. M. in Dixie Hospital. Local committee in charge of membership and clinical material: Drs. B. E. Hunt, E. S. Jones, W. P. Smith and Robert H. Wright, Jr. Enrollments: Drs. W. H. Howard, Harry B. Howe, Benjamin E. Hunt, Eldred S. Jones, William E. Knewstep, C. O. Moody, Paul Jones Parker, Willard P. Smith, O. W. Ward, Robert H. Wright, Jr.

Short Course in Clifton Forge.

Eleven physicians who were members of Dr. Lapham's class in Clifton Forge attended the two weeks' short course on the average of four-fifths of the time, an exact percentage rate of 81.8. Six other physicians and ten nurses joined them as visitors. All seven of the members who answered the office inquiry as to their opinion of the course rated the lecture as excellent or good and expressed their satisfaction with the value of the course and their interest in future similar courses in other subjects. Three considered the clinics excellent or good and three rated them lower. Pediatrics, as usual, was the preferred choice of future study.

Dr. R. P. Hawkins, Jr., Secretary of the Alleghany-Bath County Medical Society, who was instrumental in organizing the Clifton Forge course, wrote the following comment:

"I wish to take this method of expressing to you and to Dr. Lapham the entire satisfaction of all the physicians of this community in the post-graduate instruction recently completed here. I have taken each man individually, and I have found a unanimous sanction in the work done by the Pre- and Postnatal clinic. Everyone thoroughly enjoyed Dr. Lapham's lectures and all feel that they have profited by them."

Future Courses.

Beginning on March 26th and extending through June 1st, the Field Clinician of the Joint Committee on Prenatal and Postnatal Instruction will be assigned to the North Shenandoah Valley with classes in a circuit composed of Harrisonburg, Luray, Front Royal, Woodstock and Winchester.

From that time until September 28th, a period of seventeen weeks, courses in circuits of five centers extending for ten weeks or in single classes for two weeks' intensive study, may be organized wherever they are desired. It is anticipated that some of the classes may be requested by the medical societies of

Northern Virginia, the only section yet unserved.

Second Commonwealth Fund Report.

Last February in these columns the estimate of the Commonwealth Fund, through whose generosity the major expense of the Virginia program of instruction in prenatal and postnatal care has been furnished, was set forth in an excerpt from the annual report. The second statement of the Fund as it appears in the annual report of 1933 follows:

"More intensive instruction in the single field of obstetrics is being spread throughout rural Virginia by the Medical Society of Virginia, the Medical College of Virginia, and the University of Virginia, with aid from the Fund. The plan is similar to extension projects in several other states, but the thoroughness with which it is applied makes it distinctive. In the space of something over two years almost every doctor in rural Virginia will have had the opportunity to hear for a small fee a series of ten lectures, with clinical demonstrations, on prenatal care, delivery, and postpartum care. The competent obstetrician who does the teaching is giving full time to the project and is available for consultation in the doctor's office—a privilege which has been eagerly accepted. More than four hundred doctors, both white and colored, have already taken the course; and the Medical Society is thinking of adapting the plan to pediatrics or other subjects of instruction."

GEORGE W. EUTSLER,
Secretary, Joint Committee.

Proceedings of Societies

The Alexandria Medical Society,

At its monthly meeting on January 11th, elected the following officers for the year: President, Dr. S. B. Moore; vice-president, Dr. H. A. Hornthal, and secretary-treasurer, Dr. W. E. Beattie (re-elected). All are of Alexandria.

This Society is much interested in the annual meeting of the Medical Society of Virginia to be held in that city in the Fall and its members are already making plans for the success of this session. Announcements will be made later as to committees and their work.

The Mid-Tidewater Medical Society

Held its regular quarterly meeting in the Library Building of the Medical College of Virginia on January 16th. Dr. R. R. Hoskins, Mathews, was installed as president. Dr. M. H. Harris, West Point, is secretary. Several matters of business were discussed at this meeting. Dr. Southgate Leigh, Norfolk, chairman of the Committee on Group Societies of the State organization addressed the doctors and arrangements were made to have a "skeleton" society in each county. Following this meeting, the members were entertained at lunch at the Westmoreland Club. In the afternoon, the first of the series of prenatal and postnatal clinics for this group was conducted by Dr. M. E. Lapham, field clinician.

Dr. P. Q. Daniels, Deltaville, Dr. A. L. Finch, Urbanna, and Dr. Hawes Campbell, Jr., Hanover, were recently elected to membership in this Society.

Accomack Medical Society.

At the regular meeting of this Society held at Accomack Courthouse on December 19th, the following officers were elected: President, Dr. A. F. Wood, Parksley; vice-prseident, Dr. J. Fred Edmonds, Accomack Courthouse; and secretary-treasurer, Dr. John W. Roberason, Onancock (re-elected).

Drs. Daniel Brown Pierson, Jr., Chincoteague, Daniel S. Fisher, Parskley, and Clay M. Easter, Chincoteague, were admitted to membership in the Society.

The two resolutions adopted by the Medical Society of Virginia and submitted to the component societies were freely discussed. The one pertaining to non-service-connected disabilities of veterans was endorsed, and the one with regard to state and federal emergency relief was tabled as there were no definite opinions expressed by the members present.

A committee was appointed to draft suitable resolutions on the death of Dr. Sydney S. Kellam.

The Albemarle County Medical Society,

At its meeting held on January the 11th, elected the following officers for the ensuing year: President, Dr. C. Bruce Morton; vice-president, Dr. E. W. Burton; and secretary-

treasurer, Dr. Kenneth F. Maxcy, all of University.

At this meeting, resolutions were adopted on the death of Dr. John Staige Davis, a past president of the Medical Society of Virginia.

The Lynchburg Academy of Medicine

Held its first 1934 meeting on January the 8th, at which time Dr. R. D. Caldwell, Lynchburg, was installed as president. Dr. John Hundley, Jr., of Lynchburg, continued as secretary-treasurer. Dr. J. Edwin Wood, University, Va., presented a very interesting and instructive paper on "Emergencies and Pseudo-Emergencies in Heart Disease."

At this meeting, Dr. J. E. White, business manager of the Virginia Baptist Hospital, was admitted to associate membership and Dr. Edw. B. Richie, who recently moved to Lynchburg from Detroit, Mich., was received as an active member.

Roanoke Academy of Medicine.

A call meeting of this Society was held at the Roanoke Hospital, December 14th. Members of the hospital staff put on the following program:

Carcinoma of the Colon, Drs. C. Robertson, J. T. McKinney, and T. D. Armistead.

Congenital Pyloric Stenosis, Drs. L. Davis and W. L. Powell.

Encephalography in Cerebral Diagnosis with Illustrative Cases, Dr. T. Spessard.

Report of Two Interesting Cases, Dr. C. P. Eldridge, Raleigh, N. C.

Urea Nitrogen Determination in the Diagnosis of Eclampsia, Dr. I. T. Hornbarger, Hot Springs, Va.

An Unusual Case of Intestinal Obstruction, Dr. H. G. Byrd.

Chronic Progressive Idiopathic Tetany, Dr. R. Morgan.

At a dinner meeting at the Elks Club on January 8th, Dr. John Neff, of the University, read a paper on renal tumors. Dr. H. E. Jordan, of the University, spoke on the subject "Extra Medullary Blood Formation."

Officers of Local Societies.

As a result of the questionnaire recently sent local secretaries, we note the following officers whose names have not previously appeared in this department:

FREDERICKSBURG
President—Dr. W. A. Harris, Spotsylvania.
Secretary—Dr. E. R. Ware, Fredericksburg.

MECKLENBURG
President—Dr. W. L. Varn, South Hill.
Secretary—Dr. W. W. Wilkinson, La Crosse.

NANSEMOND
President—Dr. E. C. Joyner, Suffolk.
Secretary—Dr. C. H. Dawson, Suffolk.

NORTHAMPTON
President—Dr. Wm. T. Green, Nassawadox.
Secretary—Dr. W. Carey Henderson, Nassawadox.

PATRICK-HENRY
President—Dr. J. T. Shelburne, Critz.
Secretary—Dr. C. R. Titus, Bassett.

ROCKBRIDGE
President—Dr. Howard L. Mitchell, Lexington.
Secretary—Dr. E. P. Tompkins, Lexington.

News Notes

Dates for Annual Meeting of State Society.

A committee from the Alexandria Medical Society was present at the Council meeting of the Medical Society of Virginia, on January the 16th, at which time October 9th, 10th and 11th were selected as dates for the sixty-fifth annual meeting of the State Society in Alexandria. This will be our first meeting in Alexandria in over fifty years and we count on a large attendance as well as an interesting meeting.

The Tri-State Medical Association of the Carolinas and Virginia

Is to hold its annual meeting in Charlottesville, Va., February 12th, 13th and 14th, under the presidency of Dr. Francis B. Johnson, of Charleston, S. C. The clinical advantages offered by this contact with the University of Virginia should be such as to add greatly to the success of the meeting. The Tri-State is such a popular organization with doctors in this section, that we feel announcement of the dates is all sufficient to secure a large attendance. Detailed information may be secured from its secretary, Dr. J. M. Northington, Charlotte, N. C.

Committee Appointment.

Dr. G. F. Simpson, Purcellville, has been appointed by the president as a member of the Public Relations Committee of the Medical

Society of Virginia in place of Dr. J. A. Gibson, Leesburg, who was unable to accept.

Dr. Stuart McGuire Honored by Faculty of the Medical College of Virginia.

The faculty of the Medical College of Virginia gave a testimonial dinner to Dr. Stuart McGuire at the Commonwealth Club, Monday, January 15, at 6:30 P. M., in recognition of forty years of continuous service to the college. Happily this occasion was planned at a time when Dr. McGuire is giving to the institution, as chairman of the executive committee of its Board of Visitors, perhaps the most distinguished service of his connection with the college.

Dr. Roshier W. Miller, who has also had forty years of continuous connection with the institution, presided. The brief addresses were: Dr. Stuart McGuire as:

Professor of Surgery (University College of Medicine), by Dr. Robert C. Bryan, *emeritus professor of genito-urinary surgery.*

President (Medical College of Virginia), by Dr. Clifton M. Miller, *association professor of otolaryngology.*

Commander, M. C. V. Unit, World War, by Dr. Joseph F. Geisinger, *former associate in gynecology.*

A Member of the Board of Visitors, by Dr. Douglas Vanderhoof, *member of the Board of Visitors.*

The Educator, by Dr. J. Allison Hodges, *emeritus professor of clinical nervous and mental diseases.*

Counselor and Advisor, by Mr. J. R. McCauley, *secretary-treasurer Medical College of Virginia.*

The Citizen, by Honorable J. Fulmer Bright, *Mayor, City of Richmond.*

The Man, by Mr. William R. Miller, *member Board of Visitors.*

For the Faculty, by Dr. William T. Sanger, President.

In closing, President Sanger presented to Dr. McGuire a silver platter symbolic of the appreciation and affectionate regard in which he is held by the faculty.

Altogether nearly one hundred and fifty were present, including members of the Board of Visitors, the faculty, and their wives.

Dr. Southgate Leigh Honored.

At a recent largely attended meeting of the Norfolk County Medical Society, the Society conferred the title of Honorary Member upon Dr. Southgate Leigh, of Norfolk, in recognition of his pre-eminent services in the cause of organized medicine in connection with the local, State and National Associations, of all of which he has been for many years a most active and valued member.

While his professional work has always held first place with him, Dr. Leigh has also been active as a leader in civic affairs and had interest in community welfare to such an extent that a few years ago he was designated by one of the largest of the local welfare clubs as "Norfolk's most distinguished citizen."

The Gill Memorial Eye, Ear and Throat Hospital

Announces its Eighth Annual Spring Graduate Course to be held at the hospital, in Roanoke, April 9-14, 1934. Courses will be given in Ophthalmology, Otology, Rhinology, Laryngology, Facio-Maxillary Surgery, Oral Surgery, Bronchoscopy and Esophagoscopy. All lectures, demonstrations and operations will be given at the hospital, and the round table discussions will be held at the Patrick Henry Hotel each day immediately following lunch.

The following are guest members of the faculty: Drs. Perry G. Goldsmith, Toronto, Canada; Webb W. Weeks, New York; Ralph I. Lloyd, Brooklyn; Bernard Samuels, New York; Lyman Richards, Boston; E. B. Burchell, New York; Robert H. Ivy, Philadelphia; H. S. Hedges, Charlottesville; P. Chalmers Jameson, Brooklyn; Joseph C. Beck, Chicago; M. Reese Guttman, Chicago; and George Tully Vaughan, Washington. Drs. E. G. Gill, John A. Pilcher, Jr., J. Lawson Cabaniss, and Mr. Nathan Ridgeway are resident members.

Further information may be received from the Superintendent of the Gill Memorial Eye, Ear and Throat Hospital, Roanoke.

Lectures and Papers at New York Polyclinic Medical School and Hospital.

On Monday, January 8, 1934, the following program was presented at the meeting of the Clinical Society:

Diverticula of the Colon—Jerome Morley Lynch, M. D. (Attending Proctologist to the New York Polyclinic).

Oesophageal Diverticulum: Its Diagnosis, Surgical Management and End Results—Frank H. Lahey, M. D. (Boston), by invitation.

A Plea for the Alexander Method of Shortening the Round Ligaments for Retroversion of the Uterus—Louis J. Ladin, M. D. (Attending Gynecologist to the New York Polyclinic).

On Saturday, January 20, 1934—*The Technique of*

Version—By Dr. Irving W. Potter, of Buffalo (Consulting Obstetrician to the New York Polyclinic).

On Wednesday, January 24, 1934—*Diabetes in Children*—By Dr. Frederick M. Allen (Attending Physician to the New York Polyclinic).

Married.

Dr. George Glasgow Chiles, Sanford, N. C., and Miss Mae McCleur Gilmore, Olney, Md., November 16th. Dr. Chiles is a graduate of the Medical College of Virginia, class of '26.

Dr. Roy C. Fravel, Woodstock, Va., and Miss Adelaide Rebecca Smith, Clifton Forge, Va., December 24th.

Dr. William A. Runkle, Memphis, Tenn., class of '25, University of Virginia, Department of Medicine, and Miss Louise Evelyn Duke, Grenada, Miss., January 8th.

Dr. Lloyd Eastlack and Miss Muriel E. Reynolds, South Boston, Va., recently.

Dr. Charles S. Venable, former Virginian but for a number of years a surgeon in San Antonio, Texas, and Mrs. Eleanor Herff Johnson, also of San Antonio, December 16th.

Dr. Randolph Bryan Grinnan, Jr.,

Of the class of '32, University of Virginia, Department of Medicine, who has been at the Boston (Mass.) City Hospital, moved the first of the year to New York City, where he has received an appointment as assistant resident physician in Doctors Hospital.

Ground Broken for New Hospital.

Ceremonies were held in Roanoke, Va., January 16th, marking the beginning of the work on the new veterans' hospital to be built in that city. Ground was broken for the foundation of the building which it is estimated will cost $1,300,000. This is expected to be ready for occupancy in a year.

Dr. J. L. Cantor,

Formerly of Petersburg, Va , who interned at Bon Secours Hospital, Baltimore, Md., upon his graduation from the University of Virginia, Department of Medicine in 1932, has recently been appointed senior assistant resident in surgery at the West Baltimore General Hospital.

Dr. Bruce L. Randolph,

Richmond, Va., has been appointed physician to the Virginia Electric and Power Company Employees' Association, succeeding the late Dr. H. A. Bullock.

News Notes From the Medical College of Virginia.

Dr. J. C. Forbes, associate professor of Chemistry, and Dr. E. C. L. Miller, directing librarian, attended the annual meeting of the American Association for the Advancement of Science at Cambridge, Mass., in December.

Dr. Arthur J. Cramp, director of the bureau of investigation of the American Medical Association, was the guest speaker at student assembly on January 10th. Dr. Cramp spoke on "Patent Medicines."

The number of visits to the outpatient department in December, totalled 4,531, an increase of 317 over the same month for last year. The average number of patients handled a day was 181.

The regular monthly scientific meeting of the faculty and staff was held Thursday, January 11. The program was as follows:

Erythema Arthriticum Epidemicum, or "Haverhill Fever," by Dr. L. E. Sutton, Jr., Discussion by Dr. William B. Porter.

Some Recent Observations, by Dr. J. T. Tucker.

Medical Photography, by Max Freydeck.

Dr. P. St. L. Moncure, of Norfolk, and Dr. R. H. Fuller, of South Boston, were recent visitors to the college.

News From Jefferson Medical College.

The William W. Root Alpha Omega Alpha Lecture was delivered in the College Building, in Philadelphia, on the evening of January 10, by Vilhjamur Stefansson, A. M., Ph. D., LL. D., his subject being "The Friendly Arctic."

News Notes from the University of Virginia, Department of Medicine.

The Piedmont Medical Society and the Albemarle Medical Society held a joint meeting at the University of Virginia Hospital on December 13th. The following program was given: Renal Calculi, by Dr. J. H. Neff; Tularemia, by Dr. S. D. Blackford; The Tumor Clinic at the University of Virginia Hospital, by Dr. W. H. Goodwin.

On January 8th Dr. J. H. Neff spoke before the Roanoke Academy of Medicine on the subject of Tumors of the Kidney; Dr. H. E. Jordan spoke on Extramedullary Blood Formation.

Dr. E. C. Drash spoke before the Rockingham County Medical Society, meeting in Harrisonburg on January 8th, on the subject of Intrathoracic Neoplasms.

On January 8th, Dr. J. Edwin Wood spoke before the Campbell County Medical Society, meeting in Lynchburg, on the subject of Cardiac Emergencies.

Drs. A. D. Hart and J. E. Wood gave a joint paper on Rheumatic Fever at the meeting of the Albemarle Medical Society on January 11th.

On January 13th the Southern Section of the American Laryngological, Rhinological and Otological Society held its annual meeting at the University of Virginia. The program included the following papers by members of the Medical Faculty: Allergy as Related to Otolaryngology, Dr. Oscar Swineford; Roentgen Ray Therapy of Malignant Tumors, Dr. Vincent Archer.

News Notes from the Duke University School of Medicine.

The winter quarter of the school of medicine commenced January 3rd, with sixty students in the first year class, forty-three in the second year, thirty-three in the junior and twenty-seven in the senior class.

Students completing their medical course in 1934 have received interneship appointments as follows: J. S. Baker, Mrs. E. B. Easley, F. L. Owens, T. L. Peele, E. M. Rucker and A. R. Smith, Duke Hospital; E. W. Brian, R. Z. Query and W. E. Sharpe, Jr., Henry Ford Hospital, Detroit, Mich.; J. H. Cherry, City Hospital, Goldsboro, N. C.; M. C. Cobey and B. R. Kennon, The Johns Hopkins Hospital, Baltimore, Md.; W. D. Farmer, Grady Memorial Hospital, Atlanta, Ga.; J. S. Forbes and S. J. Margolin, Jersey City Medical Center, Jersey City, N. J.; K. B. Rothey, Fitkin Memorial Hospital, Neptune, N. J.; J. R. Wilson, Albany Hospital, Albany, N. Y., and C. T. Wood, St. Vincent's Hospital, Norfolk, Va.

Dr. T. S. Jennings,

Formerly connected with the medical staff at Pine Camp Hospital, Richmond, Va., has located at Waverly, Va., for general practice. He took over the offices and practice of the late Dr. L. O. Vaughan of that place.

Dr. William G. Talmage,

Class of '31, Medical College of Virginia, who interned at Cumberland Hospital, Brooklyn N. Y., has recently opened offices at Main Street and Hillside Avenue, Succasunna, N. J.

Dr. Charles A. Easley, Jr.

A member of the class of '32, Medical College of Virginia, has located for general practice at Dry Fork, Va.

Doctors Among Bank Directors.

Names of the following Virginia doctors have recently been brought to our attention as directors in banks for the coming year: Dr. E. G. Brumback and Dr. Loring Hammer, Luray; Dr. Reid White, Jr., Lexington; Dr. Herbert C. Jones and Dr. C. S. Dodd, Petersburg; Dr. Stuart McGuire, Dr. J. McCaw Tompkins, Dr. J. G. Loving, Dr. R. W. Miller, Richmond; Dr. C. D. Marchant, Harmony Village, and Dr. W. P. Jones, Urbanna.

Reserve Space Now for Scientific Exhibit in Cleveland.

Application blanks are now available for space in the Scientific Exhibit at the Cleveland Session of the American Medical Association, June 11 to 15, 1934. The Committee on Scientific Exhibit requires that all applicants fill out the regular application form and requests that this be done as early as convenient.

The final date for filing applications is February 26, 1934. Any person desiring to receive an application blank, should address a request to the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago, Ill.

State Health Department Offers Supply of Bulletins on Prenatal Care.

An increasing number of doctors are sending in requests to the State Department of Health for literature pertaining to the care of the prenatal patient. The Department is glad to supply this material. Two bulletins entitled *Prenatal Care* and *The Healthy Baby* are of especial interest. Literature concerned with other subjects may also be secured upon request.

Dr. William R. Jordan

Has opened offices at the Medical Arts Building, Richmond, where he will limit his practice to the treatment of diabetic patients. Dr. Jordan graduated from the University of Virginia, Department of Medicine, in 1928. After completing an interneship at the Massachusetts General Hospital, he assisted Dr. Elliott P. Joslin, of Boston, until October, 1932, and spent last year in Germany working on carbohydrate and fat metabolism and visiting medical clinics.

XUM

The Southeastern Surgical Congress

Will hold its fifth annual assembly in Nashville, Tenn., March 5th-7th. The Andrew Jackson Hotel will be headquarters and the lectures and exhibits will be in the War Memorial Building. Many prominent speakers will be on the program.

Information may be obtained from Dr. B. T. Beasley, secretary-treasurer, 1019 Doctors Building, Atlanta, Ga.

Mrs. B. L. Carter,

Blue Spring Run, Va., is home again after a visit of several weeks in Illinois.

Misses Marjorie Helen and Margaret Ellen Carter, twin daughters of Dr. and Mrs. B. L. Carter, have resumed teaching after spending the holiday season with their parents.

Dr. Buckner M. Randolph.

Who for several years has made his home and practiced in Charlottesville, Va., has returned to his former home, Washington, D. C.

Squibb Go-Getter Club Winners.

In accordance with its annual custom, E. R. Squibb & Sons, during the first week of the year, entertained in New York the winners of gold-star honors of the Squibb Go-Getter Club for 1933. The salesmen-winners of gold-star honors are those who have made the best sales records during the club contest which starts in January and closes at the end of November each year. In addition to monetary and honorary awards, the contest winners, as guests of honor, are invited to the home offices in New York for the enjoyment of a special program of entertainment.

The closing event of the celebration was the annual banquet of the Squibb Go-Getter Club at the New York Athletic Club on the evening of January 6th. The guests, more than 100 in number, included the sales managers of the nine Squibb sales divisions of the country, executives, department heads and Canadian representatives.

Dr. Stephen H. Watts,

University, Va., has been elected president of the board of directors of the Farmington Country Club, Charlottesville, Va., for the ensuing year.

Dr. Richard W. Vaughan,

Richmond, Va., was recently elected worshipful master of Fitzgerald Lodge, No. 299 Ancient Free and Accepted Masons, of this city.

Committeemen in Kiwanis Club.

The following doctors of Fredericksburg, Va., have been appointed as members of committees of the Kiwanis Club of that city for the ensuing year: Dr. L. Philip Cox on the boys and girls work committee; Dr. Lee Cooke, also a director, on the underprivileged work committee; and Dr. Sidney L. Scott on the inter-club relations committee.

Dr. John M. Biedler,

Harrisonburg, Va., was recently installed as twelfth president of the Harrisonburg Kiwanis Club. He was a member of the Club's first board of directors.

Dr. William H. Wilmer

Will retire as director of the Wilmer Institute of Ophthalmology of the Johns Hopkins University on July 1st, in accordance with its age regulation. He has been director of the Institute since its beginning in 1925. Dr. Wilmer is a native of Powhatan County, Va., and an alumnus of the University of Virginia. He plans to continue with his private practice and writing.

Dr. Euclid Neal,

Who has been practicing at Big Island, Va., for some time, has moved to Bedford, Va.

Dr. D. Hunter Marrow,

Boydton, Va., is spending the winter at Daytona Beach, Fla., as has been his custom for a number of years.

History of Medicine in Virginia.

The Third Volume of this most excellent and interesting work made its appearance recently. For the benefit of those who have not yet secured a copy, we would call attention to a review which appears under the heading of Book Announcements in this issue of the MONTHLY. So familiar to us all are the names of many of the doctors referred to in this volume, that we are sure it will be a most welcome addition to any doctor's library.

Dr. T. R. Boling,

Class of '31, Medical College of Virginia, recently connected with Rutherford Sanitarium, Beckley, W. Va., has located for general practice at Grantsville, W. Va.

New Books in Library, Medical College of Virginia.

The following are recent additions to the Library, Medical College of Virginia, Richmond, which may be borrowed by members of our Society, the only cost being return postage.

Arey—Developmental Anatomy.
Austin & Hughes—Clothes Moths and House Moths.
Balyeat—Migraine: Diagnosis and Treatment.
Bastedo—Materia Medica.
Bentley—Textbook of Pharmaceutics.
*Bigger—Bacteriology.
Beard—The Future Comes: a Study of the New Deal.
Billroth's Historical Studies of the Nature and Treatment of Gunshot Wounds from the Fifteenth Century to the Present Time.
*Boyd—Pathology.
Bremer—Histology.
British Med. Assoc. Pamphlet—A General Medical Service for the Nation.
British Med. Assoc. Pamphlet—The Essentials of a National Medical Service.
Cameron & Gilmour—Biochemistry in Medicine.
Cooper—Course in Practical Pharmacy.
Cooper—Dispensing for Pharmacy Students.
Cooper—Pharmacy.
Cooper—Practical Pharmaceutical Chemistry.
Cooper—Textbook of Pharmacognosy.
*Cunningham—Anatomy.
*Da Costa—Modern Surgery.
Dagen—Le Dentiste d'Autrefois.
Darwin—Autobiography.
Chadwick—Woman's Periodicity.
Cummings—The Bed-Bug; Its Habits and Life History.
*De Lee—Obstetrics
Dorrance—Operative Story of Cleft Palate.
Drewitt—Life of Edward Jenner.
Drummond—Relative Values of Cod-Liver Oil from Various Sources.
Dublin & Bunzel—To Be or Not To Be: A Study of Suicide.
Oettingen, W. F., von—Therapeutic Agents of the Quinoline Group.
Oliver, J. R.—Psychiatry and Mental Health.
Phelps & Kephuth—Diagnosis and Treatment of Postural Defects.
Power D'Arcy—Short History of Surgery.
Reid, W. D.—Teaching Methods in Medicine.
Royal Institute of British Architects—Report with Appendices.
Sewell, A. J.—The Dog's Medical Dictionary.
Small, J. K.—Manual of Southeastern Flora.
Smart, W. K—English Review Grammar.
Stanton & Fletcher—Melioidosis.
Stopes, M. C.—Roman Catholic Methods of Birth Control.
Thoma, K M.—Food in Health and Disease.
Thoms, Herbert—Chapters in American Obstetrics.
Treadwell, F. P—Analytical Chemistry.
Turner, A. L.—History of the University of Edinburgh, 1883-1933.
White, W. A.—Outlines of Psychiatry.
Wiesner, B. P., and Sheard, N. M.—Maternal Behavior in the Rat.
Williams, E. M.—The Health of Old and Retired Coal Miners in South Wales.

*These books are on the refedence shelf and cannot be loaned at present.

Dr. Benjamin Rawles, Jr.,

Formerly of Richmond, Va., who has had a service at the New York City Memorial Hospital, has now gone to New Jersey where he has received an appointment at the Jersey City Medical Center. Dr. Rawles is an alumnus of the University of Virginia, Department of Medicine, class of '30.

Dr. Charles W. Putney,

Formerly of Staunton, Va., has re-opened his offices in the Professional Building, that city.

Dr. W. D. Kendig,

Kenbridge, Va., has been appointed by Governor Peery as a member of the board of visitors of the Medical College of Virginia, succeeding the late Dr. E. L. Kendig.

Doctors as Officers at the Children's Memorial Clinic.

Dr. Lee E. Sutton has just been re-elected president of the Children's Memorial Clinic, Richmond, Va., for another year. Dr. Ramon Garcin was re-elected vice-president, and Dr. St. George Grinnan was re-elected to the board. Dr. Howard Masters were elected as a new member of the board.

For Sale—

Standard Burdick air-cooled quartz lamp. First-class condition. For information, write "S. B. A.," care this journal. (*Adv.*)

For Sale—

Fischer diatherm, mobile unit. Slightly used. If interested, address "Diatherm," care the VIRGINIA MEDICAL MONTHLY. (*Adv.*)

For Sale—

Fischer combination unit, Diatherm, Cautery, Sprays, Suction and Diagnostic Light in cabinet. Write "D-C," care this journal. (*Adv.*)

For Sale—

One large and one small McCaskey Record System. Will be sold separately. Address No. 408, care the MONTHLY. (*Adv.*)

Obituary Record

Dr. Edwin Lawrence Kendig,

Prominent surgeon of Victoria, Va., died at the University Hospital, January 15th, of heart disease complicated by rheumatic fever. He had been critically ill for several weeks. Dr. Kendig was fifty-two years of age and a graduate of the Medical College of Virginia in 1905. He interned at the Retreat for the Sick, Richmond, and later took post-graduate work in Chicago. Dr. Kendig had been located at Victoria since 1907 where he and his brother, Dr. W. D. Kendig, operated a hospital. He was a member of the American College of

Surgeons and of the Board of Visitors of the Medical College of Virginia. Dr. Kendig was for twenty-five years division surgeon for the Virginian Railway and was secretary of the Lunenburg County board of health for two decades. He had been an active member of the Medical Society of Virginia since his graduation and had served as a member of its Council and on various committees.

Dr. Kendig served two terms in the Virginia Senate. He had been chairman of the Lunenburg County Democratic Committee for twenty years and representative from the Fourth Congressional District on the State Democratic Committee for some time.

His wife and one son, who is a medical student at the University of Virginia, survive him.

Dr. Allan Moore Kimbrough

Died at his home in Norfolk, Va., January 15th, following a heart attack. He was thirty-seven years of age and a graduate of the Medical College of Virginia, class of 1921. Dr. Kimbrough was formerly of Richmond, Va. After post-graduate work in New York, he located in Norfolk where he specialized in orthopedic surgery. His wife and two children survive him.

Resolutions on Death of Dr. John Staige Davis.

At a meeting of the Albemarle Medical Association held on January 11, 1934, the following resolutions were adopted:

WHEREAS, God in his infinite wisdom saw fit to remove from our midst on September 21, 1933, our friend and member, Dr. John Staige Davis,

BE IT RESOLVED, That in the death of Dr. Davis this Society lost one of its most beloved and valued members. John Staige Davis was born at the University of Virginia on June 24, 1866, the son and the grandson of professors in that institution. He received the degree of Master of Arts in 1888 and Doctor of Medicine in 1889. After further study in the Universities of Berlin and Vienna, and a brief residence in New Orleans, where he was a member of the visiting staff of the Charity Hospital, he returned to his Alma Mater in 1893, where he was successively Instructor in Medical Biology and Pathology, Adjunct Professor of Pathology and Hygiene and Professor of Practice of Medicine. The latter position he filled with distinction from 1900 until his retirement due to ill health.

Dr. Davis was a member of Phi Beta Kappa and Alpha Omega Alpha Honorary Societies, a member of the American Academy of Medicine, of the American College of Physicians and a past President of the Medical Society of Virginia.

Dr. Davis' life and achievements impressed themselves deeply upon members of the Albemarle Medical Society, by whom he was greatly beloved for his unfailing courtesy and universal kindliness and admired for his scholarly attainments and his skill as a physician. His life was marked by a singularly high devotion to duty and conscientious service to mankind. Our Society keenly feels the loss of this distinguished member.

BE IT FURTHER RESOLVED: That a copy of these resolutions be spread on the minutes of the Society, a copy sent to the VIRGINIA MEDICAL MONTHLY and a copy to the family.

Resolutions on the Death of Dr. Sidney Sheppard Kellam.

WHEREAS, In the providence of God Almighty, we are called upon to mourn the untimely death of our colleague and fellow member, Dr. Sidney Sheppard Kellam, we take this occasion to express our appreciation of his high character, mental attainments, and eminent qualities as a physician.

He was graduated from the University of Virginia Medical School in 1898, served with honor as a member of his county, state and national societies, and was active in all matters of civic pride.

We have learned of his death with profound regret, and therefore, be it

RESOLVED, That these resolutions be spread upon the minutes of the Northampton Co. Medical Society; that a copy be sent to the bereaved family; a copy to the VIRGINIA MEDICAL MONTHLY, and that they be published in the county papers.

W. J. STURGIS, M. D.,
G. W. HOLLAND, M. D.,
Committee.

Resolutions on the Death of Dr. Wm. W. Wilkins.

WHEREAS, In the providence of God Almighty, we are called upon to mourn the death of Dr. Wm. W. Wilkins, an honorary member of our society, we recall to mind his high character and the esteem with which he was held by his patients and his fellow associates in his profession.

He was graduated from the College of Physicians and Surgeons in Baltimore, Md., in 1874. He practiced his profession faithfully in Northampton county until his retirement, about twenty-five years ago. He was considered a leader in his work, both before and after his retirement.

We learn of his death with profound regret, and therefore,

BE IT RESOLVED, That these resolutions be spread upon the minutes of the Northampton County Medical Society, a copy sent to the bereaved family, a copy to the VIRGINIA MEDICAL MONTHLY, and that they be published in the county papers.

W. J. STURGIS, M. D.,
G. W. HOLLAND, M. D.,
Committee.

Dr. Thomas Alsop,

Formerly of Richmond, Va., died in Sydney, Australia, January 15th, after several years of ill health. He was sixty-one years of age and graduated from the University of Virginia, Department of Medicine, in 1895. Dr. Alsop formerly practiced in New Jersey but, on account of ill health, retired from active practice several years ago. It was with the hope of regaining his health that he was on the present trip with a doctor friend.

Dr. Elbert W. Ross,

Sugar Grove, Va., died November 5, 1933, of pneumonia. He was sixty-seven years of age.